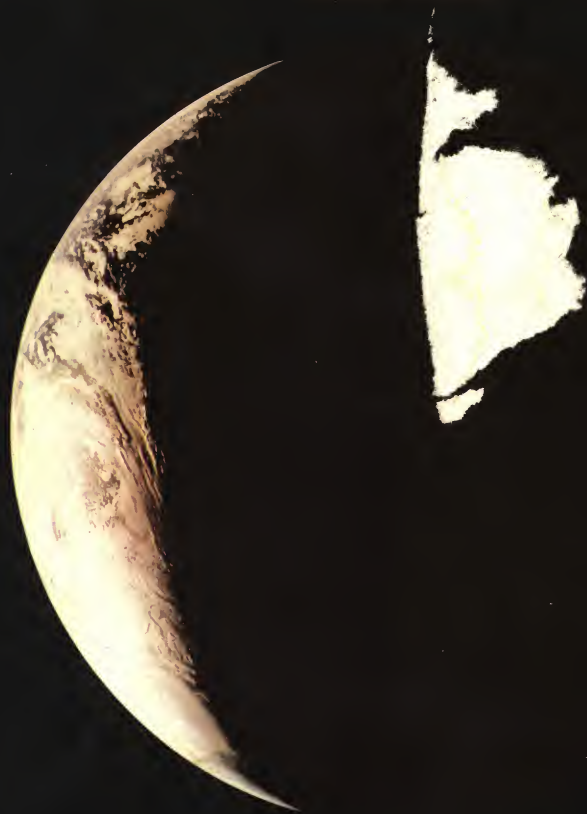


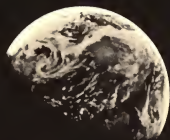
# The Last Whole Earth Catalog

*access to tools*



**\$5**

*Evening.  
Thanks again.*



*"The flow of energy  
through a system  
acts to organize  
that system."*



# FUNCTION

The **WHOLE EARTH CATALOG** functions as an evaluation and access device. With it, the user should know better what is worth getting and where and how to do the getting.

An item is listed in the **CATALOG** if it is deemed:

- 1) Useful as a tool,
- 2) Relevant to independent education,
- 3) High quality or low cost,
- 4) Easily available by mail.

**CATALOG** listings are continually revised according to the experience and suggestions of **CATALOG** users and staff.

# PURPOSE

We are as gods and might as well get good at it. So far remotely done power and glory—as via government, big business, formal education, church—has succeeded to point where gross defects obscure actual gains. In response to this dilemma and to these gains a realm of intimate, personal power is developing—power of the individual to conduct his own education, find his own inspiration, shape his own environment, and share his adventure with whoever is interested. Tools that aid this process are sought and promoted by the **WHOLE EARTH CATALOG**.

Index on p. 442

## FRONT COVER

Taken November 9, 1967, from NASA's Apollo 4 at a distance of 9880 nautical miles. This is probably the first American photograph of the "whole Earth." You're looking west over the Atlantic Ocean, with the Antarctic Continent just visible at the bottom of the crescent. The picture was released in 1967, but no one seemed to care about noticing it or publishing it. I think it was the shadow, which frightened people. There are no shadows on our maps.

## INSIDE FRONT COVER

The famous Apollo 8 picture of Earthrise over the Moon that established our planetary facthood and beauty and rarities (dry moon, barren space) and began to bend human consciousness. The quote is from *Energy Flow in Biology*, by Harold Morowitz, \$9.50 from Academic Press, 111 Fifth Avenue, New York, N.Y. 10003.

## INSIDE BACK COVER

The photograph, courtesy Lick Observatory, shows the M-31 Andromeda Galaxy, which is considered similar to our own in structure and size. Where the thought-balloon originates is approximately the location of Earth in this galaxy. The quote is from p.464 of the extraordinary *Collected Poems of Kenneth Patchen*, 1967, 504 pp., \$3.95 from New Directions, J.B. Lippincott Co., East Washington Square, Philadelphia, PA. 19105.

## BACK COVER

This is the back cover that was on our first **CATALOG**, the Fall 1968 issue, which was 64 pages and cost \$5. As most of our color covers, it was designed with Peter Bailey. The photo, the first full-Earth picture, is from the moon part of a day-long high resolution color TV film shot from an ATS satellite in November 1967. To NASA our thanks.

# CATALOG Procedure



Index on p. 442

## Ordering from the CATALOG

- Address orders to the supplier given with the item. (Or shop locally.)
  - If the price listed is not *outside* consult post office or express agency for cost of shipping from supplier's location to yours. Or have the item sent postage C.O.D.
  - Add state sales tax if transaction is within your state. (California sales tax is 5%.) You don't have to do this for periodicals.
  - Send check or money order.
- If the item says "or WHOLE EARTH CATALOG, you can get it by mail from us:

WHOLE EARTH CATALOG  
558 Santa Cruz Ave.  
Menlo Park, CA 94025

There is usually no price difference; the CATALOG gets the markup (10-40%) instead of the other guy, is all. Our service is fairly fast, especially for west coast. Generally, the closer a supplier is to you, the quicker and cheaper the shipping will be. If you're ordering from overseas, surface mail takes about two months, airmail just a couple days.

## Sense and Patience

Be gentle. Sometimes we carry very small companies. They often have a hard time coping with the volume of inquiries they receive as a result of their unrequested listing in the CATALOG. Especially when most of the requests for literature seem to be just curiosity. That kind of thing can break a small company. So don't write just to keep your mail box full.

—Fred Richardson

## Current Information

Bear in mind there's an inflation on. Prices are subject to rise without notice. Prices, addresses, suppliers — what we call access information — are as current as the most recent printing date (see bottom of this page).

The evaluations in this CATALOG were made in April-May 1971, after three years of sifting. They are not updated with subsequent printings.

Also, where there are excerpted items from catalogs we're reviewing, those items and prices are not updated from the 1971 originals.

Note. This really is the LAST CATALOG. Please don't send us your suggestions for new items and comments on old ones (except for revisions of access information). Let us R.I.P. Write to one of our kindred publications (see pp. 239-244). Or start your own catalog.

## Format

We used to be two publications, the CATALOG, and the Supplement. The CATALOG was formal and responsible; the Supplement wasn't. In this LAST CATALOG they are mixed. Usually material from the Supplements has a Light heading, whereas formal CATALOG items have a Bold heading. Both are indexed in the back. About 1/3 of the material in this LAST CATALOG is new.

Each page number has a heading indicating the section it's in, such as Whole Systems, and a heading indicating the general contents of that page, such as Funky Future.

## Blackwell's Books

Many books carried in the CATALOG are substantially cheaper in the British edition. You can order them from Blackwell's.

Blackwell's Bookstore in Oxford, England, is a service which the Catalog should list. Their collection is probably the world's most comprehensive and they run a global service, providing lengthy, free, separate catalogs on about 25 subject areas, including children's books, books in other languages, science, literature, philosophy, religion, mathematics, etc. Their prices are significantly lower and they will not send a book which can be obtained more cheaply in America unless you so request. They will open an account for you, accept your personal check, and bill you semi-annually. They also buy up old libraries (occasionally famous ones, recently John Masfield's) and issue catalogs on second-hand books and first editions. They have a cable code BOOKS OXFORD and a code system for some catalog which enables you to place an order with a minimum of cost in a hurry. The books arrive slowly but the catalogs keep coming in all year long and are a great delight themselves.

[Suggested and Reviewed by Larry Schwartz]

Catalog free from:

**BLACKWELL'S**  
Broad Street, Oxford, England

### METHODS OF PAYMENT

Orders and correspondence should, in every case, be sent direct to Oxford. The following addresses are for remittances only.

U.S.A. and American Account Area: by personal check in dollars (£1-\$2.40) sent to Blackwell's in Oxford; or to B.H. Blackwell Ltd., P.O. Box 1452, Church Street Station, New York, New York 10008 (for their account with the Bankers Trust Co.).

Canada: by personal cheque in Canadian dollars (£2-£6.11) sent to Blackwell's, or to The Canadian Imperial Bank of Commerce, P.O. Box 6003, Montreal 3, P.Q., or by Bank Draft in sterling, or by Canadian Postal Money Order.

Prices given for Blackwell's in the Whole Earth Catalog do not include shipping.

The review is a bit out of date. Blackwell's now bills monthly, and they get upset if you don't pay them reasonably promptly; gone are the days where you could have their books for six months or so before even thinking about paying for them. One of the most useful Blackwell's catalogues isn't mentioned. This is New and Forthcoming Books in all subjects, and it comes twice a year. It's a good way to keep up with what's happening.

Another central point about Blackwell's is that they will order for you books published anywhere in the world. This includes printed music, and a substantial savings can be the result, since most of the European music dealers (as well, for that matter, as a good many book publishers) have sole American distributors; the European houses will not accept direct orders from Americans — but they will accept orders from Blackwell's. Recorder music which would cost \$10 at any music store in New York City costs about \$3 when ordered from England, if the staff is foreign published.

T. B. Belanger  
New York



## Divine Right's Trip

Our Story thus far

by Gurney Norman

This original folk-tale will be found proceeding episodically along the right-hand pages (lower-right corner) in this type face, making the CATALOG what it has longed to be, a work of drama. The Perils of D.R. Tame in next page.

Starts on p. 9.

## Suggesting and Reviewing

We are a bunch of amateurs. Our reviewers — seldom experts, never critics — got \$10 and credit for their review. Suggestors got only credit until Fall 1970, then \$10.

Our policy with suppliers has been:

Suppliers (manufacturers, creators, etc.) may not buy their way into the CATALOG. Free samples, etc., are cheerfully accepted by CATALOG reviewers; response not predictable. No payment for listing is asked or accepted. We owe accurate information exchange to suppliers, but not favors.

Our obligation is to CATALOG users and to ourselves to be good tools for one another.

The judgments in the reviews are wholly sincere. They are also only partially informed, often biased, very often wishful, occasionally a temporary emotion. Many are simply hasty. I wouldn't rely on them too far. Try to see through them.

## On Getting Stuff

As Dan Schiller suggested in *Popular Photography*, the CATALOG will bankrupt you if you can't distinguish between what you need and what you wish you needed.

Start extravagant, and you'll never finish. Get the cheap tool first, see if it feeds your life. If it does, then get a better one. Once you use it all the time, get the best. You can only grow into quality. You can't buy it.

Most of the stuff in the CATALOG can be borrowed free from a library.

## This issue

of the CATALOG is the last. We encourage others to initiate similar services to fill the vacuum in the economy we stumbled into and are stepping out of. We don't see how using our name or copy can aid originality, so they're not available, for love or money. Ideas we've had and evaluations we've made are free for recycling.

Preparation of the CATALOG was done on an IBM Selectric Composer and Polaroid MP-3 Camera.

Printing and binding by:

Newsline Publications, Menlo Park, California  
Deven Lithographers, Inc., Long Island City, New York  
Craftsman Press, Inc., Bladensburg, Maryland.

For credits, and How to Make a WHOLE EARTH CATALOG AND TRUCK STORE, see p. 434.

1st Printing June 1971—200,000—Newsline

2nd Printing July 1971—100,000—Deven

3rd Printing August 1971—100,000—Deven

4th Printing September 1971—100,000—Craftsman


5th Printing October 1971—120,000—Craftsman

# Understanding Whole Systems

## Buckminster Fuller

The insights of Buckminster Fuller initiated this catalog. Among his books listed here, *Utopia or Oblivion* is now probably the most direct introduction. It's a collection of his talks and papers from 1964 to 1967, at a bargain price. An Operating Manual for Spaceship Earth is his most recent, and succinct, statement. Nine Chains to the Moon is early, and openly metaphysical. The Unlabeled Epic of Industrialization is lyrical and strong. Ideas and Integrities is his most autobiographical, and perhaps the most self-contained of his books. No More Secondhand God is the most generalized, leading into the geometry of thought.

People who beef about Fuller mainly complain about his repetition—the same ideas again and again, it's embarrassing, also illuminating, because the same notions take on different contexts. Fuller's lectures have a raga quality of rich nonlinear endless improvisation full of convergent surprises.

Some are put off by his language, which makes demands on your head like suddenly discovering an extra engine in your car—if you don't let it drive you faster, it'll drag you. Fuller won't wait. He spent two years silent after illu-  


## Utopia or Oblivion

R. Buckminster Fuller

1969, 366pp.

\$1.25 postpaid

From:  
Bantam Books  
666 Fifth Avenue  
New York, New York 10019

or WHOLE EARTH CATALOG



My recommendation for a curriculum of design science:

1. Synergetics
2. General systems theory
3. Theory of games (Von Neumann)
4. Chemistry and physics
5. Topology, projective geometry
6. Cybernetics
7. Communications
8. Meteorology
9. Geology
10. Biology
11. Scientific energy
12. Political geography
13. Ergonomics
14. Production engineering

Here on Southern Illinois' campus we are going to set up a great computer program. We are going to introduce the many variables now known to be operative in economics. We will store all the basic data in the machines memory bank; where and how much of each class of the physical resources; where are the people, what are the trends—all kinds of renderings of world maps.

Next we are going to set up a computer feeding game, called "How Do We Make the World Work?" We will start playing relatively slow. We will bring people from all over the world to play it. There will be competitive teams from all around earth to test their theories on how to make the world work. If a team resorts to political pressures to accelerate their advantages and is not able to wait for the going station rates to validate their theory they are apt to be in trouble. When you get into politics you are very liable to get into war. War is the ultimate tool of politics. If war develops the side inducing it loses the game.

I was born cross-eyed. Not until I was four years old was it discovered that this was caused by my being abnormally fatigued. My vision was thereafter fully corrected with lenses. Until four I could see only light patterns, houses, trees, outlines of people with blurred color. I saw two dark areas on human faces, I did not see a human eye or a teardrop or a human hair until I was four. Despite my inability to apprehend details, my childhood's spontaneous dependence upon high pattern clues has persisted.

I am convinced that neither I nor any other human, past or present, nor is a genius. I am convinced that what I have every physically normal child also has at birth. We could, of course, hypothesize that all babies are born genius-ensured. Unfavorable circumstances, short-sightedness, frayed nervous systems, and ignorantly articulated love and fear of elders tend to shut off for many the child's brain capability values. I was lucky in avoiding too many disconnects.

There is luck in everything. My luck is that I was born cross-eyed, and was frequently from the establishment that I was finally forced either to perish or to employ some of those faculties with which we are all endowed—the use of which circumstances had previously frustrated us to have to turn to them in great distress, whence only heliostatic hot-situations could provide enough heat to melt them back into usability.

Utopia or Oblivion

## Operating Manual for Spaceship Earth

Buckminster Fuller

1969, 133pp.

\$1.25 postpaid

From:  
Pocket Books, Inc.  
1, W. 30th St.  
New York, N.Y. 10018

or WHOLE EARTH CATALOG

To comprehend this total scheme we note that long ago a man went through the woods, as you may have done, and I certainly have, trying to find the shortest way through the woods in a given direction. He found trees fallen across his path. He climbed over those crisscrossed trees and suddenly found himself upon a tree trunk that was slowly teetering. It happened to be lying across another great tree, and the other end of the tree on which he found himself teetering lay under a third great fallen tree. As he teetered he saw the third big tree lifting. It seemed impossible to him. He went over and tried with his own muscles to lift that great tree. He couldn't budge it. Then he climbed back atop the first smaller tree, purposefully teetering it, and surely enough it again elevated the larger tree. I'm certain that the first man who found such a tree thought that it was a magic tree, and may have dragged it home and erected it as a man's first tree. It was probably a long time before he learned that any stout tree would do, and thus extracted the concept of the generalized principle of leverage out of all earlier successive special-case experiences with such accidental discoveries.

To begin our position-fixing about our Spaceship Earth we must first acknowledge that the abundance of immediately consumable, obviously desirable or utterly essential resources have been sufficient until now to allow us to carry on despite our ignorance. Being eventually exhausable and spoilsable, they have been adequate only up to this critical moment. This cushion-for-error-of humanity's survival and growth up to now was apparently provided not as a bird inside of the egg is provided with liquid nutrient to develop it to a certain point. But then by liquid nutrient is exhausted at just the time when the chick is large enough to be able to locomote on its own legs. And so as the chick pecks at the shell seeking more nutrient it inadvertently breaks open the shell.

A new, physically uncomprehended, metaphysical initiative of unbiased thought could unify the world. It could unify and probably will be provided by the utterly impersonal problem solutions of the computers.

Heisenberg's principle of 'indeterminism' which recognized the experimental discovery that the act of measuring alters that which was being measured turns experience into a continuous and never-repeatable evolutionary scenario.

The gold supply is so negligible as to make it pure voodoo to attempt to value the world's economic value through traffic through the gold-sized needle's eye'.

Brain deals exclusively with the physical, and mind exclusively with the metaphysical. Wealth is the progressive mastery of matter by mind.

Stepping forth from its initial sanctuary, the young bird must now stagger on its own legs and wings to discover the next phase of its regenerative sustenance.

## Nine Chains to the Moon

Buckminster Fuller

1938, 1963, 376 pp.

Unavailable until 1972

Since Yogi is a personalized art, the art dies with the person. The abstract power involved remains as real and true, always, but it cannot be made utilizable in increasing continuity with the general. Christ and his counterparts realized this and were unique in their refusal to apply this power to self ends. It was this personal limitation of the Yogi art which led the prosaic philosophers to search further. They sought a means of limitless articulation.

This phantom captain has neither weight nor sensorial tangibility, as has often been scientifically proven by careful weighing operations at the moment of abandonment of the ship by the phantom captain, i.e., at the instant of "death." He may be likened to the variant of polarity dynamics in our bipolar electric world which, when balanced in motion, vanishes as abstract entity 1 or 0. With the phantom captain's departure, the mechanism becomes inoperative and very quickly disintegrates into basic chemical elements.

An illuminating rationalization indicated that *captains* = phantom, abstract, infinite, and bound to other captives by a bond of understanding as proven by their recognition of each other's signs and the meaning thereof by reference to a common direction (toward "perfect")—*we're not only all related, but are one*. Mathematically, since characteristics of unity exist, they cannot be non-identical.

'Still further—over the microphone STEPPED-UP electrically this music enters a super-or-subsonic wave-length frequency that makes it broadcastable, apparently BACK INTO THE UNIVERSE AGAIN, the full LATENT broadcast of which men on ships at sea, we, can tune in upon, without any personal-equation disturbance by unwanted diverting human beings in their presence, and so far as we are music the universe that Bach heard years ago.

Here IS IMMORTALITY!

'Daring...—that radiant flash of infinite understanding had flashed between Jonessie and the X-man—"I can understand those houses all right."

## Untitled Epic Poem on the History of Industrialization

Buckminster Fuller

1962, 227pp.

\$1.95 postpaid

From  
Simon & Schuster, Inc.  
630 Fifth Avenue  
New York, New York 10020

or WHOLE EARTH CATALOG

However, man unconsciously sorting mail on an express train, with unlearned faith that the engineer is competent, that the switchmen are not asleep, that the trainwalkers are doing their job, that the technicians who designed the train and the rails know their stuff, that the thousands of others whom he may never know by face or name are collecting tariffs, paying for repairs, and so handling assets that he will be paid a week from today and again the week after that, and that all the time his family is safe and in well being without his personal protection constitutes a whole new era of evolution—the first really "new" since the beginning of the spoken word. In fact, out of the understanding innate in the spoken word was Industrialization wrought after millenniums of seemingly whitherless spade work.

## Ideas and Integrities

Buckminster Fuller

1963, 318pp.

\$1.95 postpaid

From:  
Collier Books  
The Macmillan Company  
Order Dept.  
Front and Brown Streets  
Riverside, N.J. 08075

or WHOLE EARTH CATALOG

Standing by the lake on a jump-or-think basis, the very first spontaneous question coming to mind was, "If you just said everything you've ever been asked to believe and have recourse only to your own experiences do you have any conviction arising from those experiences which either discards or must assume as a priori greater intellect than the intellect of man?" The answer was swift and anticipative. Experience had clearly demonstrated an a priori anticipative principle operating in the universe into which we are born. These principles are discovered but are never invented by man. I said to myself, "I have faith in the integrity of the anticipatory intellectual wisdom which we may call 'God.' My next question was, 'Do I know best or does God know best when I may be of any value to the integrity of universes?' The answer was, 'I have established out of experience impossible recognition of a priori wisdom of the fact of your being.' Apparently addressing myself, I said, "You do not have the right to eliminate yourself; you do not belong to you. You belong to the universe. The significance of you will forever remain obscure to you, but you may think that you are fulfilling your significance if you apply yourself to converting all your experience to highest advantage of others. You and all men are here for the sake of other men."

I define "synergy" as follows: Synergy is the unique behavior of subsystems, unpredicted by behavior of their respective subsystems, events.

(Fuller cont'd.)



No More Secondhand God  
Buckminster Fuller  
1963, 163 pp.  
\$2.45 postpaid  
from:  
Southern Illinois University Press  
600 West Grand  
Carbondale, Illinois 62901  
or WHOLE EARTH CATALOG



Thinking is a putting-aside, rather than a putting-in discipline, e.g., putting aside the tall grasses in order to isolate the trail into informative pathways. Thinking is FM-frequency modulation—for its results in tuning-out of irrelevances as a result of definitive resolution of the exclusively tuned-in or accepted feedback messages' pattern differentiability.

I see God in the instruments and the mechanisms that work reliably, more reliably than the limited sensory departments of the human mechanism.

And God says observe the paradox of man's creative potentials and his destructive tactics he could have his new world through sufficient love for "fall's" fair in love as well as in war which means you can junk as much rubbish, skip as many stupid agreements by love, spontaneous unselfishness radiant.

The revolution has come—set on fire from the top. Let it burn swiftly. Neither the branches, trunk, nor roots will be endangered. Only last year's leaves and the parasite-bearded moss and orchids will not be there when the next spring brings fresh growth and free standing flowers

Here is God's purpose—for God, to me, it seems, is a verb, not a noun, proper or improper; is the articulation not the art, objective or subjective; is loving, not the abstraction "love" commanded or entreated; is knowledge dynamic, not legislative code, not proclamation law, not academic dogma, not ecclesiastical canon.

Buckminster Fuller on Hippy Hill, San Francisco, 1968.

Yes, God is a verb, the most active, composing the vast harmonic reordering of the universe from unleashed chaos of energy. And there is born unheralded a great natural peace, not out of exclusive pseudo-static security but out of including, refining, dynamic balancing. Naught is lost. Only the false and nonexistent are dispelled.

And I've thought through to tomorrow which is also today.

The telephone rings and you say to me: Hello Bucking this is Christopher; or Daddy it's Allegra; or Mr. Fuller this is the Telephone Company Business Office; and I say you are inaccurate. Because I knew you were going to call and furthermore I recognize that it is God who is "speaking."

And you say aren't you being fantastic? And knowing you I say no.

All organized religions of the past were inherently developed as beliefs and credits in "second hand" information. Therefore it will be an entirely new era when man finds himself confronted with direct experience with an obviously a priori intellectually anticipatory competence that has interderived all that he is discovering

[No More Secondhand God]

## World Design Science Decade Documents 1-4

Fuller publishing Fuller (and some John McHale). Good raw material.

—SB

World Design Science Decade Documents, Vol. 1-4  
R. B. Fuller, John McHale

\$16.00 postpaid

from:  
World Resources Inventory  
P.O. Box 909  
Carbondale, Illinois 62901

In the 1920's with but little open country highway mileage in operation, automobile accidents were concentrated and frequently occurred within our urban and suburban presence. Witnessing a number of accidents, I observed that warning signs later grew up along the roads leading to danger points and that more traffic and motorcycle police were put on duty. The authorities tried to cure the malady by reforming the motorists. A relatively few special individual drivers with much experience, steady temperament, good coordination and natural tendency to anticipate and understand the psychology of others emerged as "good" and approximately accident-free drivers. Many others were accident prone.

In lieu of the after-the-fact curative reform, trending to highly specialized individual offender case histories, my philosophy used the anticipatory avoidance of the accident potentials through invention of generalized highway dividers, grade separators, clover leafing and adequately banked curves and automatic traffic control stop-lighting systems. I saw no reason why the problem should not be solved by preventative design rather than attempted reforms. My resolve: Rethape environment; don't try to reshape man.

[WDSO Document 1]

Tension and Compression are complementary functions of structure. Therefore as functions they only co-exist. When pulling a tensile rope its girth contracts in compression. When we load a column in compression its girth tends to expand in tension. When we investigate tension and compression, we find that compression members, as you all know as architects, have very limited lengths in relation to their cross sections. They get too long and too slender and will readily break. Tension members, when you pull them, tend to pull, approximately, (almost but never entirely), straight instead of trying to curve more and more as do too thin compressively loaded columns. The contraction of the tension members in their girth, when tensionally loaded, brings its atoms closer together which makes it even stronger. There is no limit also of cross section to length in tensile members of structural systems. There is a fundamental limit ratio in compression. Therefore when nature has very large tasks to do, such as cohering a solar system or the universe she arranges her structural systems both in the microcosm and macrocosm in the following manner. Nature has compression operating in little remotely positioned islands, as high energy concentrations, such as the earth and other planets, in the macrocosm; or as isolated electron or proton or other atomic nuclear components in the microcosm while cohering the whole universal system, both macro and micro, of mutually remote, compressional, and off non-simultaneous, islands by comprehensive tension. Compression islands in a non-simultaneous universe of tension. The Universe is a tensegrity.

[WDSO Document 2]

## The Dymaxion World of Buckminster Fuller

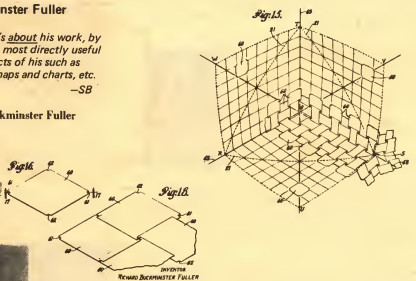
The most graphic of Fuller's books (it's about his work, by Robert Marks). Consequently it is the most directly useful if you are picking up on specific projects of his such as domes, geometry, cars, demographic maps and charts, etc.

—SB

The Dymaxion World of Buckminster Fuller  
Robert W. Marks  
1960, 232 pp.

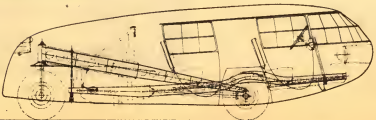
\$12.50 postpaid

from:  
Southern Ill. Univ. Press  
600 West Grand  
Carbondale, Illinois 62901  
or WHOLE EARTH CATALOG



THE DYNAMION WORLD  
OF BUCKMINSTER FULLER

Dymaxion car 1933



To start off with it is demonstrated in the array of events which we have touched on that we don't have to "earn a living" anymore. The "living" has all been earned for us forever. Industrialization's wealth is cumulative in contradiction to the inherently terminal, discontinuous, temporary wealth of the craft eras of civilization such as the Bronze Age or Stone Age. If we only understood how that cumulative industrial wealth has come about, we could stop playing obsolete games, but that is a task that cannot be accomplished by political and social reforms. Man is so deeply conditioned in his reflexes by his millennium of slave functioning that he has too many inferiority complexes to yield to political reformation. The obsolete games will be abandoned only when reality has been made more interesting games come along to displace the obsolete games.

[WDSO Document 3]

World society has throughout its millions of years on earth made its judgments upon visible, tangible, sensorially demonstrable criteria. We may safely say that the world is keeping its eye on the unimportant visible 1 percent of the historical transformation while missing the significance of the 99 percent of overall, unseen changes. Forms are inherently visible and forms no longer can "follow functions" because the significant functions are invisible.

[WDSO Document 4]

beware of whole systemitis.  
its the loneliness awareness.  
imagine you are a near sighted, bucktoothed, kid, doing  
sunflower seeds,  
and somebody comes along and puts eyeglasses on you,  
holds up a mirror,  
then takes you out on a hilltop at night,  
points up at the little winks out there,  
and tells you they aren't really little winks at all,  
but great big flashes,  
a long way away,  
then asks you if you want some more sunflower seeds.  
you want to throw away the eyeglasses, but it is too late,  
you are stuck,  
you've seen it,  
you are little,  
alone,  
puny,  
except . . . . .  
except for a few soft flannel thoughts,  
and a belief that there are others like you,  
brothers like you,  
and that a sunflower seed  
is a whole system too.

-jd

## Andromeda Galaxy

Superb black and white photo-  
graph postcard of the nearest  
galaxy to ours. Peerless  
meditation target.

-SB

[Suggested by  
Doug Engelbart]

Andromeda Galaxy  
26" x 38"

\$6.00 postpaid

from:  
Edmund Scientific  
100 Edcor Building  
Barrington, N. J. 08007



## Star Maker

A man's consciousness unwillingly departs his body and his  
planet. Once in space he accomplishes wild travel in search  
of Star Maker. His journey takes him into the minds of other  
planetary beings; a company of these travel together and  
witness countless civilizations; eventually they participate  
in a combined consciousness of worlds that in time embraces  
the stars as well; this leads to galactic and cosmic consciousness  
and the culminating encounter with Star Maker.

Jordan Belsion, who I trust in these matters, asserts that it  
is a true vision, that Stapledon's whole life pointed at attaining it,  
and that the book will be used and discussed for centuries.  
This Dover edition includes an earlier Stapledon story, "Last  
and First Men".

-SB

## Last and First Men

Illustrated Edition. Novels by H. G. Wells



Star Maker  
Olaf Stapledon  
1937: 188 pp.

\$2.50 postpaid

from:  
Dover Publications, Inc.  
180 Varick Street  
New York, N. Y. 10014

or WHOLE EARTH CATALOG

## Cosmic View

"The Universe in 40 Jumps" is the subtitle of the book. It  
delivers.

The man who conceived and rendered it, a Dutch school-  
master named Kees Boeke, gave years of work to perfecting  
the information in his pictures. The result is one of the



Cosmic View

Kees Boeke  
1967: 48 pp.

\$4.50 postpaid

from:  
The John Day Company  
297 Park Avenue South  
New York, N. Y. 10010

or WHOLE EARTH CATALOG

## The Hubble Atlas of Galaxies

This book is a series of superb photographs which is the  
definition of Edwin Hubble's classification of galaxies.  
Galaxies come in a variety of shapes from round blurry ones  
through the familiar spiral in Andromeda to fantastic  
blazing pinwheels like M101.

Hubble has lined them up in a sequence according to shape.  
The meaning of this sequence has not yet been determined.  
It may indicate a series of stages in the life of one galaxy  
which progresses from blurred youngsters to majestic  
spiral or vice versa. More likely vice versa, since the spirals  
contain hot young blue stars which we know will burn out  
in a few million years or so, while the blurry ones contain  
many ancient red giants. It is also possible that the  
sequence is not an age sequence at all, but merely reflects  
conditions at that place in the universe when that galaxy  
was formed.

But besides being a tool for scientists, this book is like a  
guided tour through our own miraculous universe. When  
this planet gets you down, leaf through the Atlas and  
feast your spirit on galaxy after galaxy, as beautiful and  
varied as snow flakes. Some galaxies are so far away that  
the graininess of the photograph shows in the blow up.  
Some photographs show small blurred objects in the  
background which one suddenly realizes are more galaxies.

[Reviewed by Jenny Deupree,  
Suggested by Jordan Belsion]

The sheer beauty of our planet surprised me. It was a huge pearl, set  
in spangled ebony. It was precious. It was an opal. No, it was far more  
lovely than any jewel. Its patterned coloring was more subtle, more  
ethereal. It displayed the delicacy and brilliance, the intricacy and har-  
mony of a live thing. Strange that in my remoteness I seemed to feel,  
as never before, the vital presence of Earth as of a creature alive but  
tranced and obscurely yearning to wake.

The sport of disembodied flight among the stars must surely be the  
most exhilarating of all athletic exercises. It was not without danger;  
but its danger, as we soon discovered, was psychological, not physical.  
Our bodiless state, collision with celestial objects mattered  
little. Sometimes, in the early stages of our adventure, we plunged  
by accident headlong into a star. Its interior world, of course, be-  
came incalculably hot, but we experienced merely brilliance.

The psychological dangers of the sport were grave. We soon discovered  
that disorientation, mental fatigue, fear, all tended to reduce our pow-  
ers of movement. More than once we found ourselves immobile in  
space, like a derelict ship on the ocean; and such was the fear aroused  
by this plight that there was no possibility of moving till, having  
experienced the whole gamut of despair, we passed through indi-  
ference and on into philosophic calm.

Though the pronoun "I" now applied to us all collectively, the pronoun  
"we" also applied to us. In one respect, namely unity of consciousness,  
we were indeed a single experiencing individual; yet at the same time we  
were in a very important and delightful manner distinct from one another.

With unreasoning passion we strove constantly to peer behind each  
minute particular event in the cosmos to see the very features of that  
infinity which, for lack of a truer name, we had called the Star Maker.  
But, peer as we might, we found nothing. Though in the whole and  
in each particular thing the dread presence of infinity manifested us,  
its very infinity prevented us from assigning to it any features  
whatsoever.

simplest, most thorough, inescapable mind blows ever  
printed. Your mind and you advance in and out through  
the universe, changing scale by a factor of ten. It very  
quickly becomes hard to breathe, and you realize how  
magnitude-bound we've been.

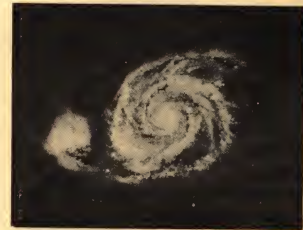
-SB



The Hubble Atlas of Galaxies  
Allan Sandage  
1961: 50 plates

\$10.00 postpaid from:  
Carnegie Institution of Washington  
1520 P Street, N.W.  
Washington, D. C. 20005

or WHOLE EARTH CATALOG



"When the cosmos wakes, if ever she does, she will find herself not  
the single beloved of her maker, but merely a little bubble adrift  
on the boundless and bottomless ocean of being."

Almost certainly, the star's whole physical behaviour is normally  
experienced as a blizzard, an ecstatic, an ever successful pursuit of  
formal beauty. This minded worlds were able to discover through  
their own most formalistic aesthetic experience. In fact it was  
through this experience that they first made contact with stellar  
mind.

We, or rather I, now experienced the slow drift of the galaxies much  
as a man feels the swing of his own limbs. From my score of view-  
points I observed the great snowstorm of many million galaxies,  
streaming and circling, and ever withdrawing farther apart from  
one another with the relentless "expansion" of space. But though  
the vastness of space was increasing in relation to the size of  
galaxies and stars and worlds, to me, with my composite, scattered  
body, space seemed no bigger than a great vaulted hall.

From all the coincident and punctual centres of power, light leapt and  
blazed. The cosmos exploded, actualizing its potentiality of space and  
time. The centres of power, like fragments of a bursting bomb, were  
hurled apart. But each one retained in itself, as a memory and a longing,  
the single spirit of the whole; and each mirrored in itself aspects of all  
others throughout all the cosmic space and time.

I said, "It is enough, and far more than enough, to be the creature of so  
dread and lovely a spirit, whose potency is infinite, whose nature passes  
the comprehension even of a minded cosmos. It is enough to have been  
created, to have embodied for a moment the infinite and tumultuously  
creative spirit. It is infinitely more than enough to have been used, to  
have been the rough sketch for some perfected creation."



## The Atlas of The Universe

*Sumptuous book. Accurate, well edited, well illustrated, well written. Does the job as no other book has, and a lot have tried.*

*Contents include exploration of space, atlas of the Earth, of the moon, of the solar system, and of the stars, along with a catalog of stellar objects, glossary of astronomical terms, and beginner's guide to the heavens.*

—SB

### The Atlas of The Universe

Patrick Moore

1970; 272 pp.

\$35.00 postpaid

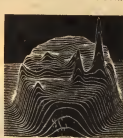
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Chicago, Illinois 60680

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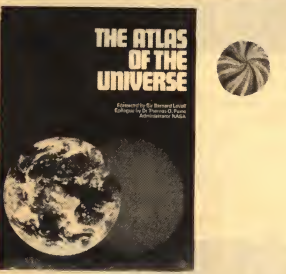
or WHOLE EARTH CATALOG

Below is a  
contour map of the centi-  
metric emission of the Sun.



## THE ATLAS OF THE UNIVERSE

Authoritative, yet beautiful  
and accessible, this book  
is a must for every  
astronomy enthusiast.



## The Unexpected Universe

*Loren Eiseley celebrates our grandest ignorances, the places in human experience where if you stare into them, the void stars back. City dumps; the open end of evolution; the unexplored continent in your mind; stars; a Pharaoh's dead gesture; edges of oceans. Strong useful prose from an old guy who knows something clear and bleak about regeneration.*

—SB

### The Unexpected Universe

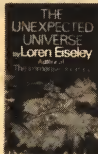
Loren Eiseley

1969; 239 pp.

\$5.75 postpaid

from:  
Harcourt, Brace & Jovanovich, Inc.  
757 Third Avenue  
New York, N.Y. 10017

or WHOLE EARTH CATALOG



In the end the sea rejects its offspring. They cannot kill their way home through the surf which casts them gleefully back upon the shore. The tiny breathing pores of starfish are stuffed with sand. The rising sun shrivels the mucilaginous bodies of the unprotected. The seabach and its endless war are soundless. Nothing screams but the gulls.

The sun behind me was pressing upward at the horizon's rim—an ominous red glare amidst the tumbling blackness of the clouds. Ahead of me, over the projecting point, a gigantic rainbow of imperfection had sprung shimmering into existence. Somewhere toward its foot I discerned a human figure standing, as it seemed to me, within the rainbow, though unconscious of his position. He was gazing fixately at something in the sand.

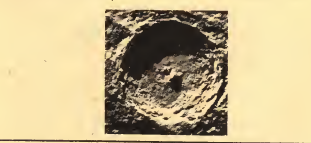
## The Character of Physical Law

*If you look larger or smaller than the skinny realm of life, all you see is physics. It is our substratum and superstratum. These famous Feynman lectures introduce the subject as no other book has.*

—SB [Suggested by Lyle Burkhead]

6 Universe  
Whole Systems

The Lagoon Nebula, M8 Sagittarii, is a typical emission nebula, 4850 light-years away. The "lagoon" is produced by the foreground dust-clouds. It is thought that the star producing the H-II region is of type O, and is so deeply embedded in the nebula that it cannot be observed. Globules have been detected, indicating that star formation is in process. The Lagoon is a dense nebula; there are 10<sup>5</sup> to 10<sup>6</sup> atoms per cubic centimeter in the central region—eventually through this density still corresponds to what we would normally term a laboratory vacuum.



Eventually he stooped and flung the object beyond the breaking surf. I labored toward him over a half mile of uncertain footing. By the time I reached him the rainbow had receded ahead of us, but something of its color still ran hastily in many changing lights across his features. He was starting to kneel again.

In a pool of sand and silt a starfish had thrust its arms up stiffly and was holding its body away from the stifling mud.

"It's still alive," I ventured.

"Yes," he said, and with a quick yet gentle movement he picked up the tank and spun it over my head and far out into the sea. It sank in a burst of spume, and the waters roared once more.

"It may live," he said, "if the offshore pool is strong enough." He spoke gently, and across his bronzed worn face the light still came and went in subtly altering colors.

"There are not many come this far," I said, groping in a sudden embarrassment for words. "Do you collect?"

"Only like this," he said softly, gesturing amidst the wreckage of the shore. "And only for the living." He stooped again, oblivious of my curiosity, and skipped another starfish near the water's edge.

"The stars," he said, "throw well. One can help them."

... It is as if at our backs, masked and demonic, moved the trickster as I have seen his role performed among the remnant of a savage people long ago. It was that of the joker present at the most devout of ceremonies. This creature never laughed; he never made a sound. Painted in black, he followed silently behind the officiating priest, mimicking, with the added flourish of a little who, the gestures of the devout one. His timor and stylized posturings conveyed a derision infinitely more formidable than actual laughter.

We had been sent in the enchanted forest only because of our weakness. When the powers of that gloomy region were given to us, immediately, as in a witch's house, things began to fly about unbidden. The tools, if not science itself, were linked intangibly to the subconscious portmanteau aspect of man's nature. The closer man and the natural world drew together, the more erratic became the behavior of each. Huge shadows leaped triumphantly after the solemn backs of the priesthood. Here, there was one difference. The shadows had passed out of all human semblance; no societal rigidity safely contained their posturings, as in the warning dance of the trickster. Instead, unseen by many because it was so gigantic really, the multiplied darkness threatened to submerge the carriers of the light.

### The Character of Physical Law

Richard Feynman

1965; 173 pp.

\$2.45 postpaid

from:  
M.I.T. Press  
50 Ames Street, Room 765  
Cambridge, Mass. 02142

or WHOLE EARTH CATALOG

### The Character of Physical Law

Richard Feynman

1965; 173 pp.

\$2.45 postpaid

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50 Ames Street, Room 765  
Cambridge, Mass. 02142

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### Landing of Apollo 12 (above)

The lunar module Intrepid is seen descending toward the Oceanus Procellarum (19 November 1969). This photograph was taken from the command module. After Intrepid had returned to orbit, and had been abandoned, it was deliberately crashed on to the Moon setting up crustal vibrations which lasted for almost one hour.

### The Galaxy below

The Galaxy, seen edge-on. The Sun is 30,000 light-years from the center of the system. The direction of the center is toward the rich star-clouds in the constellation of Sagittarius, but it cannot be seen through the obscuring intervening matter.



... Out of the depths of a seemingly empty universe had grown an eye, like this eye in my room, but an eye on a vastly larger scale. It looked out upon what I can only call itself. It searched the skies and it searched the depths of being. In the shape of man it had ascended like a vaporous emanation from the depths of night. The nothing had miraculously gazed upon the nothing and was for which no precedent existed, or a projection out of, nature not content. It was an intrusion into, or a projection out of, nature of value arisen from the domain of absolute zero. A little whirlwind of commingling molecules had succeeded in confronting its own universe.

Here, at last, was the rift that lay beyond Darwin's tangent bank.

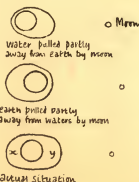
I picked up a star whose tube ventured timidly among my fingers while, like a true star, it cried soundlessly for life. I saw it with an unaccustomed clarity and cast fear out. With it, I flung myself as forlorn, for the first time, into some unknown dimension of existence.

Around me in the gloom dark shapes worked ceaselessly at the dampened fires. My eyes were growing accustomed to their light. "We get it," the dump philosopher repeated. "Just give it time to travel, we get it all."

Man, unknowingly, and whether for good or ill, appear to be making his last decisions about human destiny. To pursue the biological analogy, it is as though, instead of many adaptive organisms, a single gigantic animal embodied the only organic future of the world.

Every time we walk along a beach some ancient urge disturbs us so that we find ourselves shedding shoes and garments, or scavenging among seaweed and whitened timbers like the homesick refugees of a long war.

It was the failures who had always won, but by the time they won they had come to be called successes. This is the final paradox, which man call evolution.



The water at y is closer to the moon and the water at x is farther from the moon than the rigid earth. The water is pulled more towards the moon at y, and at x is less towards the moon than the earth, so there is a combination of those two pictures that makes a double tide.

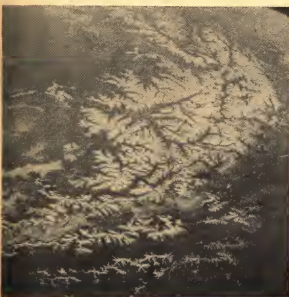
Double Situation

We do not realize what we have on Earth until we leave it.—JAMES M. LOVELL



Figure 16 An infrared photo of the Gulf coast showing two plumes of smoke from forest fires December 7, 1965

from Ecological Survey From Space



From an astronaut's vantage point, one can gaze down into the tremendously deep chasms of the Hindu Kush range in the Himalayas. The sky above the white crowns of snow on the peaks was clear when this photo was taken, but clouds filled the valleys. Temperatures as well as altitudes vary widely in this part of the world. When the morning Sun warms the highlands, fierce cold winds run down the mountain sides to increase the rigors that men must endure to climb them.

from This Island Earth

## NASA Earth Photo Books

You're too close. Back off and survey the big picture and old mysteries will clear up for you, and other mysteries will arrive (what is that enormous gyre in the Salton Sea?).

The earliest of the NASA color photo books, Earth Photographs from Gemini III, IV, and V, and Earth Photographs from Gemini VI through XII, are the purest, least edited and evaluated. Hundreds of full page color photos of North Africa, the Himalayas, New Mexico, ocean cold fronts, if they were Sierra Club books, and they could be, they would cost \$25 each. They cost \$7 and \$8.

Exploring Space With a Camera takes you up through Apollo 7, with good putting-it-all-together text. Ecological Surveys From Space, still plenty beautiful, gets into big picture grit of how and where our systems affect each other. Invaluable information, which we're still learning how to interpret. This Island Earth. The most recent NASA book photographically places Earth in the Solar System.

Among the discoveries in these books is that this lovely place is scarcely inhabited, and scarcely inhabitable.

## Full Earth

Mandala Earth, the high noon color image shot from a synchronous satellite over South America in November 1967, is available as a poster from WHOLE EARTH CATALOG for \$22 postpaid. It's 22" x 27". An order of five or more gets 50% discount.

—SB



—SB

### Earth Photographs from Gemini III, IV, and V

NASA  
1967; 266 pp.

\$7.00 postpaid

### Earth Photographs from Gemini VI through XII

NASA  
1968; 327 pp.

\$8.00 postpaid

[Suggested by Steve Woodcock]

### Exploring Space With a Camera

NASA SP-168 (1968 O-292-883)  
1968; 214 pp.

\$4.25 postpaid

### Ecological Surveys From Space

NASA  
1970; 75 pp.

\$1.75 postpaid

[Suggested by Frank Rowson, Jr.]

### This Island Earth

NASA—SP-250  
1970; 182 pp.

\$6.00 postpaid

all from:  
U.S. Govt. Printing Office Bookstore  
710 North Capitol Street  
Washington, D. C. 20402

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Federal Office Building  
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Chicago, Illinois 60604

or WHOLE EARTH CATALOG

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Kansas City, Missouri 64106

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460 Golden Gate Avenue  
Rm. 1023, Box 36104  
San Francisco, California 94102

## Whole Earth Rising

Bigger and Better color Earth Posters than ours. Good ones are: Giant Earth (shown below) and Earth Over Moon.

—SB



\$3.00 postpaid

from:  
Celestial Arts  
1345 Howard Street  
San Francisco, California 94103  
or WHOLE EARTH CATALOG

## Space Law

An International "Treaty for Outer Space" was prepared at Geneva in 1966 with the following principles written in. The treaty is in the process of ratification by various nations. In April 1967 the U.S. Senate approved it 88 to 0.

- No nation can claim sovereignty to outer space, to the Moon or to other celestial bodies.
- All nations have the right to conduct space activities.
- No one may use outer space or celestial bodies to begin a war.
- The rules of the United Nations charter apply to space activities.
- No country may station in space or orbit around the Earth nuclear or other weapons of mass destruction.
- No country may install such weapons on a celestial body.
- No nation may establish military bases, installations, or fortifications on a celestial body. Nor may any weapon be tested or military maneuvers be conducted there. The right to visit another country's installations and space vehicles on a celestial body is guaranteed.
- Astronauts are envoys of mankind. If an astronaut lands on another country's soil he must be returned safely, promptly and unconditionally.
- Space activities and their results are to be reported for the benefit of all.

Discovery, Invention, Research  
Fritz Zwicky  
1909, 276  
\$6.95

from:  
The Macmillan Company  
Front and Brown Streets  
Riverside, New Jersey 08075

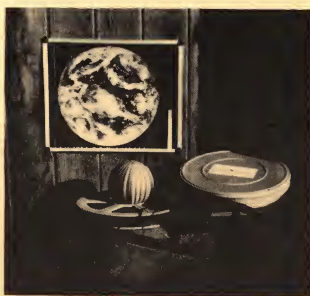
## Full Earth

In November 1967 an ATS satellite whose funds phenomenally had not been cut made a home movie. It was a time lapse film of the Earth rotating, shot from 23,000 miles above South America. (This is synchronous distance. The satellite orbits at the same speed the Earth turns, so it remains apparently stationary over one point of the equator.) Color photographs of the Earth were transmitted by TV every 1/3 hour to make up a 24-hour sequence. The shots were lap dissolved together to make the movie. You see darkness, then a crescent of dawn, then advancing daylight and immense weather patterns whirling and creeping on the spherical surface, then the full round mandala Earth of noon, then gibbous afternoon, crescent twilight, and darkness again.

A 16mm 400-foot silent color print of the film includes several forms of the 24-hour cycle and close-up cropping of specific sectors as their weather develops through the day.

The film (NR 68 - 713) costs \$48.94 plus shipping

from:  
Byron Motion Pictures  
65 K Street NE  
Washington, D.C. 20002







## Man's Domain

I scarcely believe it. An inexpensive, paperback, lightweight but complete World Atlas that skips all the political planetary periscope and goes straight to the guts: climate, minerals, agriculture, population, languages, land forms, ocean forms—all the remorseless factors that have been invisible to most of humanity until recently. Nice work, McGraw-Hill, you whipped Rand McNally and Hammond at their own game. —SB

Man's Domain  
General Drafting Co.  
1968. 75 pp.  
\$3.50 postpaid

from:  
McGraw-Hill Book Co.  
Princeton Road  
Hightstown, N. J. 08520  
Manchester Road  
Manchester, Mo. 63062  
8171 Delaware Highway  
Norato, CA 94947  
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POPULATION

## Man's Domain A THEMATIC Atlas OF THE WORLD



from:  
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## The Times Atlas of the World

"A world remade must be a world remapped." This intelligent dictum was issued at the end of *Warle We I* by Lord Northcliffe, then proprietor of *The Times of London*. He didn't wait for someone else to do the job: *The Times Survey Atlas of the World*, with cartography by John Bartholomew of Edinburgh, was issued in 1921, and was recognized immediately as one of the finest atlases ever printed. The tradition has been continued, and the latest *Times Atlas*—the Comprehensive Edition—is the best place for an English-speaking person to find where in the world something is located. The book also has a unique ability to convey the feel of the world. It measures 18" x 12 1/2" x 2", weighs 11 pounds, and contains 468 pages, of which 240 are double-page maps of superb accuracy and beauty. The index-gazetteer includes more than 200,000 entries, incomparably more than any other atlas of the world, and the entries are keyed not only by individual map coordinates, but by latitude and longitude as well (a feature offered by no other atlas). Despite the huge number of place names the maps are extraordinarily legible, and they are mercifully free of the pink-purple-yellow political emphasis offered by lesser cartographers. Some of the place names may look strange to American readers, because the atlas follows the rules of the Permanent Committee of Geographical Names. This supra-political body simply believes that places should be called what their occupants call them. In cases where the generic name is unfamiliar, the traditional anglicized name is also given, in parentheses.

The Comprehensive Edition of *The Times Atlas of the World* is published in the United States by Houghton Mifflin Company, Boston, Massachusetts. It is dedicated, by gracious permission, to Her Majesty Queen Elizabeth II, and bound in appropriately regal bright red linen, gold-stamped. It costs \$57.50, and it will make anything else on your coffee table seem puny, as the whole world should.

[Suggested and reviewed by  
Dr. Morton Grosser]

Times Atlas of the World  
Comprehensive 1 Vol. Edition  
1968. 568 pp.

\$57.50 postpaid

Note: Karl Jozsef reminds us that Times Atlas of the World can be bought for just over \$30 (delivered) from: Blackwell's, [See p. 2]

## Human Use of the Earth

To get a handle on your future you've got to get outside your self, because only from outside can you see your space-time environment whole. One way is to identify out into another culture, Indian or whatever (this is Jim Ninio's idea). Another way is to take Philip Wagner's trip into fascinated objectivity about Earthly doings. In this book he merges some of the best of geographical and anthropological perspective into a detailed treatise on the Earth as tool, how it is used and how to understand it better to use it better. —SB

The Human Use of the Earth  
Philip Wagner  
1960. 270 pp.

\$2.45 postpaid

from:  
Free Press  
Macmillan Company  
Riverside and Brown Streets  
Riverside, N. J. 08075

or WHOLE EARTH CATALOG

## THE HUMAN USE OF THE EARTH

PHILIP WAGNER



As we shall see, one of the strategies by which supplies of goods and services become available for actual use is the movement of the would-be consumers themselves to the sources of goods or services. There are even objects that act as containers of men himself, which move over land, across water or through the air, delivering the individual to the places at which he can obtain goods he desires, or where he will be served as he wishes.

The modern inhabitant of a commercial country does not make his world; he buys it. The material circumstances of his life are not the outcome of his individual encounter with the natural order, but arise out of his relations with the social order.

Those same features of the most complex human communities which indicate their ecological advantages also suggest an unusual degree of inherent ecological risk. Such communities are complex and delicately balanced, and depend utterly upon their artificiality. They and the individuals in them are threatened by the same biological penalties that attend any highly specialized system or species. Their very technical proficiency may destroy them in time as other high specializations have destroyed many former species of animals and plants.

The individual organism must, on the one hand, be specialized enough in function to exploit some particular conditions in the habitat, so as to occupy a niche that no other organism can contest with it; and it must, on the other hand, possess enough versatility to adapt to any conditions of environment that may impinge upon its life activities. These two requirements may be thought of as polar extremes of a continuous scale, and every species may be placed somewhere along the scale between specialization and versatility. Some of the disadvantages of commitment to either specialization or versatility are overcome by aggregation of organisms into larger groups within the community.

## Divine Right's Trip

Our story thus far

by Gurney Norman

PART ONE



## DIVINE RIGHTS BUS, URGH

I was a fairly straight '63 VW microbus till Divine Right got me a good clean red and white seven passenger job with five new re-capped tires and near perfect upholstery. The only bad thing that ever happened to me was the Muncy's youngest kid used to puke on my seats all the time. The Muncys bought me new in Germany when the old man was stationed over there in the army. He was a Master Sergeant in an infantry outfit, a little odd for that kind of work maybe, but he liked it well enough to volunteer for Vietnam when that war heated up. They brought me to the States when the sergeant went to Vietnam, and after he got blown up by a land mine, his wife Marie traded me in on a Falcon.

Two days on a car lot is a long time when you're not used to it. It was hot and damn boring, so even though this guy Divine Right looked pretty weird, I was so eager to get on the road again I felt grateful to him for buying me, although it did piss me off when the dealer let me go for only five hundred and fifty dollars. Divine Right paid the man with cash he'd got from a big grass score that morning, and if I could whistle I'd have whistled when we drove away together.

Which goes to show you how much I knew about freaks in those days. I hadn't gone five hundred miles with that son of a bitch before I'd of given my fuel pump to be back on that parking lot. That bastard drove me from Boston to Chicago to St. Louis to Cincinnati without once checking my oil. I found out later he didn't even know where my damn oilstick was. Drove non-stop too, all day and night, the only break he took was a little rest was when he'd slow down long enough to refuel or buy a re-burger. If his brother-in-law in Cincinnati hadn't noticed I was a quack and a half low I'd probably have thrown a rod soon as we hit the next freeway.

D.R. doesn't seem to like them much, but his sister and brother-in-law are nice people. Doyle understands about cars, he's a mechanic, he knows how to take care of machines like he tried to tell D.R. about preventive maintenance, but D.R. was too stoned to pay attention. He was on speed that trip, out of his skull on rattles and benzadines. He told Doyle he had to split in order to make the Ultimate Rendezvous. Doyle said what's an Ultimate Rendezvous? But D.R. just grinned and started my motor and drove away.

So you get some idea of where D.R.'s head was at. He was the kind of guy who never had the faintest idea how he affected things. He could fuck over a nice '63 VW microbus he'd just paid five hundred and fifty dollars for and never blink an eye. I don't know what was the most humiliating, having my working parts ignored, or all that stupid paint sprayed all over my body. Inside and outside, I suffered both ways. It's one thing to go around feeling bad because you're low on oil; but when you have to look like a made-up queen it gets to be a bit much. Housepaint, Dry-Glo, fingernail polish, you name it and I got smeared with it. Sometimes he'd pull off into the emergency lane of some big interstate and start painting on the spot. Said God was sending him directions how to do it. Sometimes he'd pick up hitchhikers and let them lean out the window and paint while he drove. By the time him and his weird friends got through I looked like a watercolor that got rained on. It was awful.

But I survived. I don't know how but I did. Well, I do know too. It was Estelle. There's no doubt about it, that little lady saved my ass from the junkyard. She was one nice person, that Estelle. There was something kind of off about her, it seemed like she cried a lot. But she sure knew how to be nice to an old broken-down bus. She'd wash me, and empty my ash trays. Sometimes D.R. would be too stoned to drive and Estelle would take over, and it would just be so fine, just me and her cruising quietly across the country through the night. That was the thing about Estelle. She understood cruising, she understood roads, and traffic, she knew how to flow with things in motion. I never did understand what she was in D.R., but I guess it's not my place to have opinions about people. My job was to carry them around from place to place while they acted out their story, and although I counted it most of the time I did my best. It was painful, but I do have to say that it was interesting, and instructive. On some level I'm sure I'm a better bus now. I know what I could have a voice in this narrative to tell my side of the story, but Gurney says there's too many points of view already to clutter it up even more with a talking car. So this is the only chance I'll have to speak my mind. It ain't much, but when you've been down as long as I have, you get grateful for small favors. So goodbye, if you're ever rambling around down in the Kentucky mountains, come by and see me sometime.

Bless you all.  
Urge

Geography  
Whole Systems

9



## Geology Illustrated

An artist of aerial photography, Shelton uses some 400 of his finest photos to illuminate a discussion of the whole-earth system. Not a traditional textbook, but a fascinating exploration of the problems posed by asking "How did that come about?" Worth buying for the photos and book design alone, but you'll probably find yourself becoming interested in geology regardless of your original intentions.

[Reviewed by Larry McCombs]

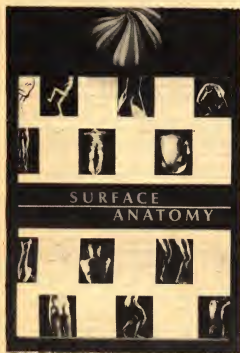


### Surface Anatomy

This book is included as a companion piece to the Earth picture books. The whole lovely system of the human creature, seen from without, surface by surface, is here. One of its main revelations is how cliché ridden our usual views of ourselves are—we are still not good with mirrors (satellites were up 10 years before we got a full view of the Earth). Posing friends and neighbors, with a simple light set-up and a 35mm camera, Joseph Royce has shot the most beautiful human album I know.

It also teaches anatomy.

—SB

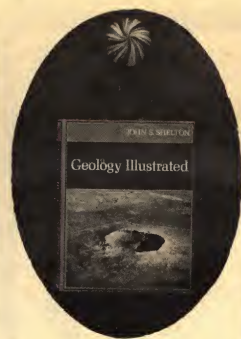


**Surface Anatomy**  
Joseph Royce  
1965; 124 photographs  
and some diagrams

**\$12.50** postpaid

from:  
F. A. Davis Company  
1914 Cherry Street  
Philadelphia, PA 19103

or WHOLE  
EARTH  
CATALOG



**Geology Illustrated**  
John S. Shelton  
1966; 424 pp.

**\$10.50** postpaid

from:  
W. H. Freeman & Co.  
660 Market Street  
San Francisco, CA 94104

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EARTH  
CATALOG



have been placed on the photographs and very few on the drawings. The text (which almost invariably concerns an illustration on the same or a facing page) serves as an expanded legend for the picture; if, while reading it, it is necessary to look more than once to identify some feature with certainty, this is no more than Nature asks of those who contemplate her unlabelled cliffs and hills.



## The World from Above

Close-up glamor shots of the Earth. Mystery shots (What is that? What's our altitude above it, 10 feet or 10,000?) (Fold out captions tell all.) Good traffic flow pattern shots: surface anatomy of civilization. Not a bad compendium; it'll do until they reprint E. A. Gorkind's Our World From the Air.

—SB



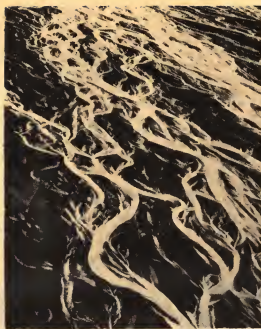
### The World from Above

Hanne Reich  
1966; 88 pictures

\$8.50 postpaid

from:  
Hill and Wang, Inc.  
141 Fifth Avenue  
New York, N. Y. 10010

or WHOLE EARTH CATALOG



### ST. GEORGE AND THE DRAGON

Here comes D.R. Davenport. Divine Right he calls himself after that incredible stoned-out afternoon when the words *Divine Right* formed in the clouds above the meadow where he was lying in the grass looking up and breathing deeply in awe of how really simple everything is when you come right down to it. Divine Right he calls himself, D.R. for short, driving along the highway now through a dark and rainy night in his VW microbus, Uge.

When all of a sudden Urge's headlights pick up a hitch-hiking freak on the road ahead.

I sure don't want to pick that guy up, D.R. told himself. I wish I didn't have to. He was into a radio talk show out of Los Angeles. This strange woman had called in to comment on dress styles and wound up on the Turner thesis and the American westward movement. D.R. was listening to her rap, even talking back from time to time, shaking his finger, agreeing and disagreeing, (but not too loudly; Estella was asleep in the back of the bus somewhere and he didn't want to disturb her). Estella was another reason not to pick the freak up but, out there the poor fucker was, sitting on his backpack holding out his thumb, with a little black dog huddled against his feet. So, D.R. dimmed the headlights and turned the radio down and pulled off the road just past where the guy was sitting.

"Get in," said Divine Right. "We're just, you know, rolling along, digging it, the windfalls wipers, rain on the roof, this weird westward movement lady's on the radio, how far you going, how long you been sitting out there?"

The hitch-hiker heaved his gear in and stuffed it on the floor. He was a little old fella, just barely strong enough to lift his pack inside. But finally he managed it, and his dog Salvatore leaped in behind him. Divine Right didn't even bother to sniff out his new scene. He just curled up on the floor next to the emergency brake and lay completely still.

D.R. said, "Davenport's my name, Divine Right Davenport. Like, this radio guy says KCBR, sort of sings it you know, says KCBR, Wayne Dixon here may, I have your name please? And I say Divine Right is my name and weirdness is my game, what's yours?"

Meaning, of course, his passenger, who was pissing D.R. off just sitting there. D.R. was a word man, you see, he liked to talk and to be talked to, and thirty seconds into their ride together his passenger hadn't said a thing. All he did was nod and grin and look at the wet highway stretching out in the long beams of light up ahead. After a mile or two D.R. was wishing he'd minded his own business and left the silent bastard sitting by the roadside, rain or no rain.

He turned the radio back up.

"... all I mean is that genocide against the Indians was the official policy of every American President after Andrew Jackson." The announcer was sighing. "Are you saying our government had a policy..."

"Absolutely. It's a well known, I mean you're in radio, it's common knowledge among informed people."

"It's common rumor, maybe..."

"Rumor, hell," D.R. said. "The lady's right. Every word she says is true." He turned the radio down then and leered across to stare at his passenger. "And I'll bet if you'd say something, it'd turn out to be true too, I know it would."

When the hitch-hiker didn't answer, D.R. started slowing down. "What I want to know, fuckhead, is how you're gonna keep dry when I dump your ass out in the rain about half a mile from now."

And when there was still no reply, D.R. brought Urge to a full stop, and leaped across again to look his passenger full in the face. He was surprised to see how young the freak was. Fifteen, sixteen at the most. D.R. was only twenty one himself, but the kid made him feel like an old man. He had a goatee of scrappy whiskers, twenty three long blonde hairs sticking out of various little blotches on his skin. His eyes were pale blue, streaked with red.

"Far out," said Divine Right. "Did you know you had red, white and blue eyes?"

No longer smiling, the kid opened the door and got out in the rain. He left his pup on the floor while he got his pack on, and settled his floppy, wide-brim hat back on his head. Finally he was ready. As he reached in to get his dog he looked up at D.R. and said, "Did you ever read about St. George and the Dragon?"

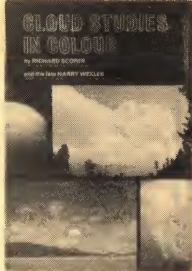
D.R. said he hadn't.

"It's far out shit," said the kid. And he closed the door and started walking down the highway toward where ever they'd just come from.

## Cloud Studies in Colour

If you really don't know clouds at all, there's another side—namely recognition and knowing what's going on in your part of the atmosphere. This lovely book of color photos and detailed descriptions can help.

—SB



Cloud Studies in Colour  
Richard Scorer and Harry Wexler  
1967; 44 pp.

\$7.00 postpaid

from:  
Pergamon Press Inc.  
44-01 21st Street  
Long Island City, N. Y. 11101

or WHOLE EARTH CATALOG

## Kalliroscope

Nine square inches of divine turmoil. Rotating on its spinner or cooking on its stand, the Kalliroscope models the action on the surface of the Earth and in all the waves and fires and (probably) in your head. —SB

[Suggested by

Sandra Tcherepnin]

Kalliroscope

View \$15; stand \$10 postpaid

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Kalliroscope Corporation  
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Cambridge, Mass. 02142

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## Laws of Form

The laws of form have finally been written! With a *Spencer Brown* transcribed power razor in *Twentieth Century* model of Occam's razor. G. Spencer Brown cuts smoothly through two millennia of growth of the most prolific and persistent of semantic weeds, presenting us with his superbly written laws of form. This *Herculean task* which now, in retrospect, is of profound simplicity results in a new discovery of the form of laws. Laws are not descriptions, they are commands, injunctions: "Do!" Thus, the first constructive proposition in this book (page 3) is the injunction: "Draw a distinction" — an exhortation to perform the primordial creative act.

After this, practically everything else follows smoothly: a rigorous foundation of arithmetic, of algebra, of logic, of a calculus of indications, intentions and desires; a rigorous development of laws of form, may they be of logical relations, of descriptions of the universe by physicists and cosmologists, or of functions of the nervous system which generates descriptions of the universe of which it is itself a part.

The ancient and primary mystery which still puzzled Ludwig Wittgenstein (*Tractatus Logico-Philosophicus*, A. J. Ayer (ed), Humanities Press, New York, 1961, 166 pp.), namely that the world we know is constructed in such a way that we are able to see itself, G. Spencer Brown resolves by a most surprising turn of perception. He shows, once and for all, that the appearance of this mystery is unavoidable. But what is unavoidable is, in one sense, no mystery. The world is unavoidable, it is, what is revealed will be fate of all descriptions "it" — what is concealed will be concealed, but what is concealed will appear as revealed."

At this point, even the most faithful reader may turn suspicious: how can the conception of such a simple injunction as "Draw a distinction!" produce this wealth of insights? It is indeed amazing—but, in fact, it does.

The clue to all this is *Spencer Brown's ingenious choice* for the notation of a "law" which does several things at one time. This mark is taken for drawing a distinction, say, by drawing a circle on a sheet of paper which creates a distinction between points inside and outside of this circle; by its asymmetry (the concave side being its inside) it provides the possibility of indication; finally, it stands for an instruction to cross the boundary of the first distinction by crossing from the state indicated on the inside of the token to the state indicated by the token (A space with no token indicates the unmarked state). Moreover, these operations may operate on each other, they are generating a primary arithmetic, an opportunity which is denied us by a faulty notation in conventional arithmetic as pointed out by Karl Menger in *"Gulliver in the Land without One, Two, Three"* (*The Mathematical Gazette*, 53, 24-250, 1959).

These operations are defined in the two axioms (no other ones are needed) given on pages 1 and 2. They are:

Axiom 1. The law of calling

The value of a call made again is the value of the call.

This is to say, if a name is called and then is called again, the value indicated by the two calls taken together is the value indicated by one of them.

This is to say, for any name, to recall is to call.

(In notation:  $\boxed{\quad} = \boxed{\boxed{\quad}}$  the "form of condensation".)

Axiom 2. The law of crossing

The value of a crossing made again is not the value of the crossing.

This is to say, if it is intended to cross a boundary and then it is intended to cross it again, the value indicated by the two intentions taken together is the value indicated by none of them.

This is to say, for any boundary, to recross is not to cross.

(In notation:  $\boxed{\quad} = \boxed{\boxed{\quad}}$  the "form of cancellation".)

For instance, take a complex expression

$$E = \boxed{\boxed{\boxed{\quad}}}$$

Then, by the two axioms

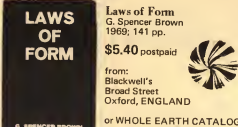
$$E = \boxed{\boxed{\quad}}$$

In the beginning this calculus is developed for finite expressions only (involving a finite number of  $\boxed{\quad}$ ), simply because otherwise any demonstration would take an infinite number of steps, hence would never be accomplished. However, in Chapter 11, *Spencer Brown* tackles the problem of infinite expressions by allowing an expression to re-enter its own space. This calls for trouble, and one anticipates now the emergence of antinomies. Not so! In his notation the classical clash between a simultaneous *Nay* and *Yes* never occurs, the system becomes "di-stable". *Flipping from one to the other of the two values as a consequence of previous values, and thus generates time*. Amongst the many gems in this book, this may turn out to be the shiniest.

Sometimes the reading gets rough because of *Spencer Brown's* remarkable gift for parsimony of expression. But the 30 pages of "Notes" following the 12 Chapters of presentation come to the reader's rescue precisely at that moment when he lost his orientation in the lattice of a complex crystal. Consequently, it is advisable to read them almost in parallel with the text, if one can suppress the urge to keep on reading Notes.

In an introductory note *Spencer Brown* justifies the mathematical approach he has taken in this book: "Unlike more superficial forms of expertise, mathematics is a way of saying less and less about more and more; this strategy is pushed to its limit, we shall be able to say nothing about all. This is, of course, the state of ultimate wisdom and provides a nucleus for a calculus of love, where distinctions are suggested and all is one. *Spencer Brown* has made a major step in this direction, and his book should be in the hands of all young people—no lower age limit required."

(Reviewed by Heinz Von Foerster.  
Suggested by Steve Bae)



CONSTRUCTION  
Draw a distinction.

CONTENT  
Call it the first distinction.  
Call the space in which it is drawn the space severed or cloven by the distinction.  
Call the parts of the space shaped by the severance or cleft the sides of the distinction or, alternatively, the spaces, states, or contents distinguished by the distinction.

INTENT  
Let any mark, token, or sign be taken in any way with or without regard to the distinction as a signal.  
Call the use of any signal its intent.

In all mathematics it becomes apparent, at some stage, that we have for some time been following a rule without knowing it. Consciously aware of the fact. This might be described as the use of mathematics consists in the advancement of the consequences of what we are doing, whereby the cover becomes overt. Mathematics is in this respect *par excellence*.

One of the most beautiful facts emerging from mathematical studies is this very potent relationship between the mathematical process and ordinary language. There seems to be no mathematical idea of any importance or profundity that is not mirrored, with an almost uncanny accuracy, in the common use of words, and this appears especially true when we consider words in their original, and sometimes long forgotten, senses.

The main difficulty in translating from the written to the verbal form comes from the fact that in mathematical writing we are free to mark the two dimensions of the plane, whereas in speech we can mark only the one dimension of time.

Much that is unnecessary and obstructive in mathematics today appears to be vestigial of this limitation of the spoken word.

Any evenly subtended equality of the second degree might be called, alternatively, evenly informed. We can see it over a subversion (turning round) of the surface upon which it is written, or alternatively, as an in-formation (formation within) of what it expresses.

Such an expression is thus informed in the sense of having its form within it, as the same time informed in the sense of remembering what has happened to it in the past.

We need not suppose that this is exactly how memory happens in an animal, but there are certainly memories, so-called, constructed this way in electronic computers, and engineers have constructed such in-formed memories with magnetic relays for the greater part of the present century.

We may perhaps look upon such memory, in this simplified form, as a precursor of the more complicated and varied formations of memory and information in man and the higher animals.

We can also regard our mental formations of the classical forms of physical or biological science in the same spirit.

There is a tendency, especially today, to regard existence as the source of reality, and thus as a central concept. But as soon as it is formally examined (cf. Appendix 2), existence ( $[\text{ex} = \text{out}, \text{stare} = \text{stand}]$ ). Thus to exist may be considered as to stand outside, to be extant. It seems to be highly peripheral and, especially corrupt (in the formal sense) and vulnerable. The central truth, the most central, although still recognizably peripheral. If the weakness of present-day science is that it centres round existence, the weakness of present-day logic is that it centres round truth.

Throughout the essay, we find no need to the concept of truth, apart from two avoidable appearances (true = open to proof) in the descriptive context. At no point, to say the least, is it necessary to insist that the truth of what is said. These forms are thus not only precursors of existence, they are also precursors of truth.

It is, I am afraid, the intellectual block which most of us come up against at the metaphysical where, to experience the world exists, we must abandon existence to truth, truth to indication, indication to form, and form to void, that has to hold up the development of logic and its mathematics.

## Tao Teh King

Reviewing the Tao is like reviewing the Bible. As soon as you presume, it just giggles and rains on you. Nevermind.

The Tao Teh King is a very old book (500 B.C. is one date) written by a legend named Lao Tzu. It describes how the universe is and makes an excellent case for harmony as the only survival technique that works. This translation by Archie Bahn is straightforward.

(Suggested by Jack Loeffler)

Tao Teh King  
Lao Tzu, Archie Bahn  
P.B.C., 1988; 128 pp.  
\$1.25 postpaid



or WHOLE EARTH CATALOG

Everyone says: "Nature is great, yet Natura is simple."

It is great because it is simple.

If it were not simple, long ago it would have come to little. Nature sustains itself through three precious principles, which one does well to embrace and follow.

There are gentleness, fragility and humility.

When one is gentle, he has no fear of retaliation.

When one is fragile, he can afford to be generous.

When one is humble, no one challenges his leadership.

But when rudeness replaces gentleness, And extravagance replaces fragility, And pride replaces humility, Then one is doomed.

Since a gentle attack arouses little antagonism, And a gentle defense provokes little anger, Nature predisposes to gentleness those most suited for survival.

Intelligent control appears as uncontrol or freedom.

And for that reason it is genuinely intelligent control.

Unintelligent control appears as external domination.

And for that reason it is really unintelligent control.

Intelligent control exists inflexibly without appealing to do so.

Unintelligent control tries to influence by making a show of force.

It is because we single out something and treat it as distinct from other things that we get the idea of its opposite. Beauty, for example, one distinguished, suggests its opposite, ugliness. And Goodness, when we think of it, is naturally opposed to badness.

In fact, all distinctions naturally appear as opposites. And opposites get their meaning from each other and find their completion only through each other. The meanings of "id" and "is" arise from our distinguishing between them.

Likewise, "difficult and easy," "long and short," "high and low," "loud and soft," "before and after"—all derive their meanings from each other.

Therefore the intelligent man accepts what is as it is. In seeking to grasp what is, he does not devote himself to the making of distinctions which are then mistaken to be separate existences. In teaching, he teaches, not by describing and pointing out differences, but by example.

Whatever it exists, and he sees that nothing is gained by presenting what fully exists by a description—another lesser, diluted kind of existence.

If something exists which cannot be wholly revealed to him with his viewpoint, he does not demand of it that it be nothing but what it seems to him.

If some one else interprets him, he does not think that interpretation as being equal to his existence.

If some part of him stands out as if a superior representative of his nature, he will not surrender the rest of his nature to it.

And not surrendering the whole of his nature to any part of it, he keeps himself intact.

This is how the intelligent man preserves his nature.

We cannot escape the fact that the world we know is constructed in order (and thus in such a way as to be able) to see itself. This is indeed amazing.

Not so much in view of what it sees, although this may appear fantastic enough, but in respect of the fact that it can see at all.

But in order to do so, evidently it must first state what is seen. In this severed and mutilated condition, whatever it sees is only partially itself. We may take the world of what is seen to be itself (i.e. is distinct from itself), but, in any attempt to see it as an object, it must, equally undoubtedly, act so as to make itself distinct from itself, false to itself. In this condition it will itself annihilate itself.

To explain, literally to lay out in a plane where particulars can be readily seen. Thus to place or plan in flat land, sacrificing other dimensions for the sake of appearance. Thus to regard or put out at the cost of ignoring the reality or the truth of what is so put out. Thus to take a view away from its prime reality or reality, or to gain knowledge and lose the kingdom.

## Part Two: Reward

From the outset I was determined to avoid relating to the garden abstractly, in terms of "poetry," or "ideas." My usual tendency is to reduce my experience to metaphors, then render the metaphors in words, and I wanted to beat that up this time. Food, cleaned and swallowed, was what the garden was all about, and nothing less than that was going to satisfy the experience to come alive outside my head, in the concrete world, and achieving that of course was the prime reward.

But the thing I'm pleased to discover, now that the garden is a fact, is that I'm not as nervous as I was about abstracting. Abstractions built out of other abstractions can lead to actual sickness, I believe. But abstraction derived from the concrete is like the other side of the coin, yin and yang. It feels good to talk about gardening, even though the work is done. Feels like a long time, in fact. Like desert, after a good meal. It's amazing what a little honest, sweat-producing work can do for a nervous head.

So stuff has been occurring to me: talk, for instance. The difference in the quality of talk that grows out of true experience, against talk that grows out of other talk. Talk among people who never do anything but talk, vs. words between people who have other things to do with themselves. Drawing room conversation dependent on other drawing rooms, against conversation among people who've just come from the world. Political opinions based on other people's political opinions, against a politics growing from the life you're personally lived. It's like the difference between a wax apple, and one just dropped off a tree.

And this: rules. How we've all gone around crazy the past few years in revolution against rules because they are rules discovering some rules that are bad, deciding all rules must be bad, so what the world needs is anarchy. Head filled with such cheap creep, then coming up against something like a garden, entering into the work of it as if: this is my career I decide the processes of this garden because I'm a free man and I'm going to do my thing. So you thing is to spray water around. "Express" yourself in water. It's so... aesthetic. The came of the spray is so... poetic. It's a suitable art form, no less, the aesthetic of agriculture. Jackson Pollock with a green thumb. Spray here, spray there, spray all over God's whole creation cause I'm going to do my thing.

Well, do that. Because what's happening, the reason all those beans and tomatoes and carrots are, like drooping a little is that you've damaged near drowned the things. *Alas* so you learn: the gardener doesn't make up the terms of his relationship to the garden. He doesn't invent them out of his precious head, change them around according to his petty whim. The terms exist before he gets there and they'll still exist long after he has gone. It's like the plants are saying: "Give us your joy hip ecstatic; we want water, and we want it in precise amounts, according to the varying root systems of each plant. We want fertilizer, and if you don't know how much, find out. Find out about nitrogen, about phosphorus, about potash. For if you expect anything from this garden, you must know what the garden expects of you. There's a reality among these rows, stuff is going on bigger than all of us, so dig it. You are only a part of what is happening here. Fit your self into the scheme. Abide by the law, and maybe you'll be pleased that you did."

Then this: pick up a radical newspaper, see a picture of the entrance to an Army post. Fort Dick, probably. And above the picture are the words: "Obey the law." "Obey the law." "Obey the law is freedom." It's one of the philosophical highlights of the gardening season to read those words in political terms, and then to read them in the same terms in the terms of the natural world and think: how true, how true.

From The Free You Volume 3 September 1969

## Sand County Almanac

"Classic." It's called now, because it was published in 1949 and still has bite. Wherever the ecologist looks the world weaves a wild story. This one looked at Sand County, among other places, and was led to propose a Land Ethic.

[suggested by everybody] —SB

A Sand County Almanac  
by Aldo Leopold  
1949; 295 pp.

\$ 0.95 postpaid

from: Ballantine Books, Inc.  
101 Fifth Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

SAND COUNTY ALMANAC

American conservation is, I fear, still concerned for the most part with show pieces.

Perhaps the most serious obstacle impeding the evolution of a land ethic is the fact that our educational and economic system is headed away from, rather than toward, an intense consciousness of land. Our true modern is separated from the land by many middlemen, and by innumerable physical gadgets.

A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.

## Solar Journal

its sure hard to put a handle on this book.  
a strange overture, maybe,  
or fluid bings:  
richard grossinger brings a gnt's ass  
and a cannonball  
together,  
makes them fit,  
shows how they are connected,  
then takes a long skinny ecological finger  
and gently tweaks the reader's nose. . .  
learn from him.

—jd

Solar Journal: Ecological Sections  
Richard Grossinger  
1970; 130 pp.

\$4.50 postpaid

from:  
Black Sparrow Press  
Box 25603  
Los Angeles, California 90025  
or WHOLE EARTH CATALOG



In the beginning there was only the unity of the Ice Sheet. Then followed the unity of the March thaw, and the northward hegin of the international geese. Every March since the Pleistocene, the geese have honked unity from China Sea to Siberian Steppe, from Euphrates to Volga, from Nile to Murrumbidgee, from Lincolnshire to Spitzbergen. Every March since the Pleistocene, the geese have honked unity from Curruick to Labrador, Matamoras to Uluva, Horseshoe Lake to Hudson's Bay, Avery Island to Barfin Land, Panhandle to Mackenzie, Sacramento to Yukon.

By this international commerce of geese, the waste corn of Illinois is carried through the clouds of the Arctic tundra, there to combine with the waste sunlight of a nights June to grow gooslings for all the lands between. And in this annual barter of food for light, and winter warmth for summer solitude, the whole continent receives as net profit a wild poem dropped from the murky skies upon the minds of March.

I was young then, and full of trigger-itch; I thought that because fewer wolves meant more deer, that no wolves would mean hunters' paradise.

We all strive for safety, prosperity, comfort, long life, and dullness.



So in his article on sanctity and adaption, Rappaport cites two essential tautologies: that every living being is connected to every other living being, and that the environment is so complex that we cannot predict the total consequences of any action. So the supernatural world, in which all beings, visible and invisible, are connected by the grain of the bread, in which the consequences are never seen yet always critical, is not just similar but identical to the natural world. It is science which operates with an imaginary environment, an environment it imagines it can control, in which it believes its own predictions, setting limits on just how far it will trace a poison or follow a river. Who cares if insecticide in Iowa pollutes the Great Lakes, who cares if the poisonous wastes from the potato factory in Maine pour into New Brunswick, as long as the crod passes political boundaries? Who cares if the microorganisms are poisoned, the algae and snails choked, these are not man's delicacies? Who cares about the supernatural, the world we cannot see? Who cares what happens in the sky? If the fish after the fish are eaten, when every house has a garbage disposal; except during a garbage strike in New York the people forget that there is waste and the waste goes somewhere, motorboats killing off everything in a lake during successive Memorial Days and July 4's and Labor Days? And every living organism shares in the consequences, and the consequences are collective, only civil wars says the astronaut looking down at Earth, only civil wars even as the hunter shoots the bear, the fish are caught in the Bella Coola trap. And everyone is simultaneously the benefactor and the victim; we are all victimized by what we are made out of, by, in fact, the same thing that makes the difference. The consequences never cease but pass and rebound, and this is the story of light in the universe, a sun whose powers flood on beyond Earth, beyond planets, an Earth which receives the decay of other stars.



NOTE ON SPELLING: Ecology is the etymological spelling of Ecology. The *topos* of *oikos* is the law of the house in the deepest sense: meaning the speech by which the house is known to itself, meaning that the house is subject to the proportions of its rule. It's house rules I'm talking about, just and unjust, or finally JUST. I want to recall to you the house, of which planet is one aspect, language is another, body is another, having in the same time the economy is the management of the house and Oikumenia is the known, inhabited, LIVED IN world.

## LOOKING FOR DOPE

Urg's wipers wiped and wiped and wiped and wiped and wiped and wiped and wiped, and still D.R. could barely see through the windshield. It hadn't bothered him the first few hours, but as the rain kept falling and the night wore on and his eyes got sore and tired, the world outside the windshield gradually turned into such a visual mush D.R. had trouble keeping Uge on the road. What Uge needed was a new set of windshield wipers, and what D.R. needed was some food and a good night's sleep. But short of that the next best thing of course was a good hit of grass to kind of bring things into focus.

Sorry old boss, he said to Uge as he felt his shirt pocket for a J.

And he meant that too. One of Divine Righ's convictions was that it was possible to turn a white onto a black, and the right means could be found. One time just before crossing the Canadian border he'd stalled on a case of prime Afghan hash in Uge's trunk one Uge had obviously loved. With a little bit of Uge's headlights had started flashing on and off, his horn spontaneously bleated notes of joy. At least it had seemed that way. D.R. was pretty stoned himself at the time and it may have been that those were only things he wanted Uge to do. At any rate, the bus began to cough and choke and gasp for breath after a while, and he'd had to take the hash back out. But that's okay, Uge old buddy, D.R. said, feeling his shirt for a J. That's all right. I'm working on it. One of these days I'll come up with a formula to stone you with so fine, so right you'll think: divine.

The joint D.R. had put in his shirt pocket was gone. All he found was a tattered book of matches. He looked in the glove compartment and felt in his leather-belt-pouch, but it was the same. So at a wide place at the end of a bridge D.R. pulled off the road and started to rummage around the bus in search of dope.

"What is it?"

"Shhh. Go back to sleep."

"What is it?" Estelle sat up and rubbed her eyes. She was in a sleeping bag, lying cross-ways on the mattress near the back of the bus. The bus wasn't wide enough for her to stretch out fully, but there was so much junk scattered around there wasn't any other place to lie. In spite of having to twist herself into an S to lie down, she'd slept so deeply for seven straight hours that now she was having trouble bringing her eyes to stay open.

"Go back to sleep."

"No, I'm awake. Where are we?"

"Fuck, I don't know. Somewhere out west."

(continued)



## On Growth and Form

A paradigm classic. Everyone dealing with growth or form in any manner can use the book. We've seen worn copies on the shelves of artists, inventors, engineers, computer systems designers, biologists.

—SB

On Growth and Form  
D'Arcy Wentworth Thompson  
Two volume edition  
1917, 1952

\$27.50 postpaid

Abridged paper edition  
1917, 1951, 246 pp.

\$2.75 postpaid

from:  
Cambridge University Press  
510 North Avenue  
New Rochelle, N. Y. 10801

or WHOLE EARTH CATALOG

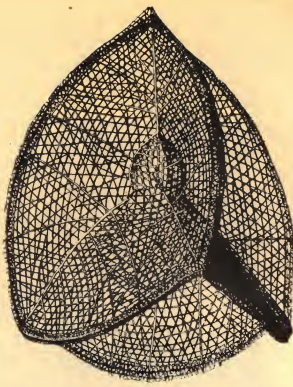
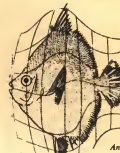


Fig. 135. *Polyprius*.

Fig. 151. *Pseudoplatystichus albus*.



*Asignia capra*.

The engineer, who had been busy designing a new and powerful crane, saw in a moment that the arrangement of the bony trabeculae was nothing more nor less than a diagram of the lines of stress, or directions of tension and compression, in the loaded structure. In short, that Nature was strengthening the bone in precisely the manner and direction in which strength was required; and he is said to have cried out, "That's my crane!"



Fig. 143. (a) *Harpinia plumosa* Kr.; (b) *Stegocephalus inflatus* Kr.; (c) *Hyperia galba*.

When Plateau made the wire framework of a regular tetrahedron and dipped it in soap-solution, he obtained in an instant a beautifully symmetrical system of six films, meeting three by three in four edges and these four edges running from the corners of the figure to its centre of symmetry. Here they meet, two by two, at the Maraldi angle; and the films meet, three by three, to form the re-entrant solid angle which we have called a "Maraldi pyramid" in our account of the architecture of the honeycomb. The very same configuration is easily recognized in the minute siliceous skeleton of *Callinella*. There are two discrepancies, neither of which need raise any difficulty. The figure is not rectilinear but a spherical tetrahedron, such as might be formed by the boundary edges of a tetrahedral cluster of four co-spherical bubbles; and just as Plateau extended his experiment by blowing a small bubble in the centre of his tetrahedral system, so we have a central bubble also here.

This bubble may be of any size; but its situation (if it be present at all) is always the same, and its shape is always such as to give the Maraldi angles at its own four corners. The tension of its own walls, and those of the films by which it is supported or slung, all balance one another. Hence the bubble appears in plane projection as a curvilinear equilateral triangle; and we have only got to convert this plane diagram into the corresponding solid to obtain the spherical tetrahedron we have been seeking to explain.

The geometry of the little inner tetrahedron is not less simple and elegant. Its six edges and four faces are all equal. The films attaching it to the outer skeleton are all planes. Its faces are spherical.



Fig. 63. Diagrammatic construction of *Callinella*. (a) A bubble suspended within a tetrahedral cage; (b) another bubble within a skeleton of the former bubble.

and each has its centre in the opposite corner. The edges are circular arcs, with cosine  $\frac{1}{2}$ ; each is in a plane perpendicular to the chord of the arc opposite, and each has its centre in the middle of that chord. Along each edge the two intersecting spheres meet each other at an angle of  $120^\circ$ .



Fig. 101. Crane-head and femur. After Culmann and J. Wolf.



## Purposive Systems

You're a purposive system. So am I. We're very good at it, and not as good as we'd like to be. Humanity, as a whole, is lousy at it, and worried. This collection of recent cybernetic thoughts can cheer you up and give you better concepts to worry with.

### Purposive Systems

—SB

Ed.: Heinz von Foerster, J. D. White, L. J. Peterson, J. K. Russell  
1968, 179 pp., from

Scotlan Books  
\$10.00  
432 Park Avenue South  
New York, N. Y. 10016  
or WHOLE EARTH CATALOG

We have not yet built into our educational system any recognition of the points where precision is essential, and yet we are living in a society where one mistake can dislocate the lives of thousands of people, wreck distribution systems, and distort life-history data, and subsequent career lines.

There is no basic reason why one cannot design a control memory with a different technology, a technology which would allow the computer itself to alter the information stored in the control memory. Thus we would have a computer that could alter its own character as required. To my knowledge very little conceptual work has been done in thinking through the implications of this extremely powerful possibility. The possibilities are so staggering and deep. The poor harried souls responsible for trying to understand the classical computer as we now know it with this idea would go away.

The act of choosing a representation for a problem involves the specification of a space where the search for solution can take place. Such a specification involves the choice of a language—and its use—for expressing problem conditions, properties of solutions, and knowledge of regularities in the search space.

If we detach the concern of survival from computers, as is generally the case, they can learn abilities more useful to man than the struggle for existence.

A friend of mine once gave what I regard as a nice shorthand formula. When in a dilemma, introduce novelty.

Exaggerated politeness is a powerful source of misunderstanding.

Regularity seeking activities that seem to be generally useful include the detection of symmetries, the identification of "critical points" (key points through which the search must go to get a solution), and the recognition of redundant information in problem descriptions.

## Aspects of Form

This is a well-used collection of insights by venerable initiators of form study.

### Aspects of Form

—SB

Lancelot Lew Whyte, ed.  
1951, 249 pp.

\$1.95 postpaid from

Indiana University Press  
10th and Morton Streets  
Bloomington, Ind. 47401

or WHOLE EARTH CATALOG



Fig. 2 Copperhead Snake—illustrating the effectiveness of disruptive contrast in relation to background configuration.

A man may learn by experience to associate two series of events between which any connection seemed at first wildly improbable. For such associations to be possible, provision must be made for every signal entering the nervous system to be relayed to every part, not merely to the specialized receiving zone. Thus from the knot of an event is generated a web of speculation; when two series of events are perceived together they form the warp and woof of a shimmering fabric into which is woven the pattern of the probability that the two events are significantly related.

An 'image' in this biological sense, then, is not an imitation of an object's external form but an imitation of certain privileged or relevant aspects. It is here that a wide field of investigation would seem to open.

We now that there are certain privileged motifs in our world to which we respond almost too easily. The human face may be outstanding among them. Whether by instinct or by very early training, we certainly are ever disposed to single out the expressive features of a face from the chaos of sensations that surrounds it and to respond to its slightest variations with fear or joy.



## Synthesis of Form

Christopher Alexander is a design person that other design people refer to a lot. This book deals with the nature of current design problems that are expanding clear beyond any individual's ability to know and correlate all the factors. The methodology presented here is one of analysis of a problem for misfit and synthesis of form (via computer-translatable nets and hierarchies) for minimum misfits.

—SB

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But if we think of the requirements from a negative point of view, as potential misfits, there is a simple way of picking a finite set. This is because it is through misfit that the problem originally brings itself to our attention. We take just those relations between form and context which obstruct most strongly, which demand attention most clearly, which seem most likely to go wrong. We cannot do better than this. If there were some intrinsic way of reducing the list of requirements to a few, this would mean in essence that we were in possession of a field description of the context: if this were so, the problem of creating fit would become trivial, and no longer a problem of design. We cannot have a unitary or field description of a context and still have a design problem worth attention.

## The Sciences of the Artificial

Simon says: we have generalized methods of obtaining elegant information from nature. We don't have generalized methods of making elegant things to add to nature; we lack a science of design. He's right and he doesn't waste much time being right, but proceeds to make useful suggestions—lots of them probably wrong and useful anyway. His notion of sub-system stability in evolution is beautiful.

—SB

### The Science of the Artificial

Herbert Simon  
1969; 123 pp.

\$1.95 postpaid

from:  
The M.I.T. Press  
Room 705  
50 Ames Street  
Cambridge, Mass. 02142

or WHOLE  
EARTH  
CATALOG

## General Systems Yearbook

Good thinking, rotten publishing. The usual graphic output in this yearbook is three pallid diagrams. And you know that the mothers who wrote the articles are forever whacking away at their blackboards, but because typewriters don't draw, all that vivid stuff gets left in the author's private experience. Man, there's something suspect about *General Systems Theory* if the practitioners are this far out of intelligent communication. Here's part of the contents of a recent volume, which may help to vindicate matters.

—SB

### General Systems

Ludwig von Bertalanffy, Anatol Rapoport,  
Richard L. Meier, eds.

\$10.00 postpaid per volume

from:  
Society for General Systems Research  
Joseph Henry Building, Room B18  
2100 Pennsylvania Avenue, N.W.  
Washington, D. C. 20006

## NOTES ON THE SYNTHESES OF FORM

CHRISTOPHER ALEXANDER

Notes on the Synthesis of Form  
Christopher Alexander  
1964; 216 pp.

\$2.25 postpaid

from:  
Harvard University Press  
73 Garden Street  
Cambridge, Mass. 02138

or WHOLE EARTH CATALOG

Indeed, not only is the man who lives in the form the one who made it, but there is a special closeness of contact between man and form which leads to constant rearrangement of unsatisfactory detail, constant improvement. The man, already responsible for the original shaping of the form, is also alive to its demands while he inhabits it. And any-thing which needs to be changed is changed at once.

A subsystem, roughly speaking, is one of the obvious components of the system, like the parts shown with a circle round them. If we try to adjust a set of variables which does not constitute a subsystem, the repercussions of the adjustment affect other parts outside the set, because the set is not sufficiently independent. The procedure of the unselfconscious system is so

organized that adjustment can take place in each one of these subsystems independently. This is the reason for its success.

In the selfconscious situation, on the other hand, the designer is faced with all the variables simultaneously.

The greatest clue to the inner structure of any dynamic process lies in its reaction to change.

The Mousgoun cannot afford, as we do, to regard maintenance as a nuisance which is best forgotten until it is time to call the local plumber. It is in the same hands as the building operation itself, and its exigencies are as likely to shape the form as those of the initial construction.

The selfconscious individual's grasp of problems is constantly misled. His concepts and categories, besides being arbitrary and unstable, are self-perpetuating. Under the influence of concepts, he not only does things from a biased point of view, he sees them do things to him. The concepts control his perception of fit and misfit—until in the end he sees nothing but a misfit from his concept's point of view, and does not only the urge but even the mental opportunity to frame his problems more appropriately.

The solution of a design problem is really only another effort to find a unified description. The search for realization through constructive diagrams is an effort to understand the required form so fully that there is no longer a rift between its functional specification and the shape it takes.

Two misfits are seen to interact only because, in some sense at least, they deal with the same kind of physical consideration. . . . It is such a physical context of implication, if I may say it this way, which makes finding it easy to grasp. Because it refers to a distinguishable physical property or entity, it can be expressed diagrammatically, and provides a possible non-verbal point of entry into the problem.

### The Artifact as 'Interface'

We can view the matter quite symmetrically. An artifact can be thought of as a meeting-point—an 'interface' in today's terms—between an 'inner' environment, the substance and organization of the artifact itself, and an 'outer' environment, the surrounding in which it operates. If the inner environment is appropriate to the outer environment, or vice versa, the artifact will serve its intended purpose. Thus, if the clock is immune to buffeting, it will serve as a ship's chronometer. (And conversely, if it isn't, we may salvage it by mounting it on the wall.)

I should like to point to evidence that there are only a few 'intrinsic' characteristics of the inner environment of thinking men that limit the adaptation of his thought to the shape of the problem environment. All else in his thought, which is the artifact, is learned and is subject to improvement through the invention of improved designs.

D.R. was on his knees next to Estelle, digging in a duflie bag. A light would have helped but Urge's overhead light was out, and D.R. didn't know where the flashlight was.

"Here, honey, light this candle," said Estelle, and she handed him a candle.

But somehow climbing through the gemstone debris to get to the back, D.R. had lost the matches. He yelled goddamn it as loud as he could yell.

"Shhh, honey, it's all right. What are you looking for?"

"I'm looking for the goddamn doggie that I had in my goddamn hand not six goddamn hours ago. The shet's what I'm looking for."

And he lifted the duflie bag by its bottom and dumped its contents on top of the other stuff already scattered over the mattress.

Estelle found a match and lit it. The whole wild interior of the bus came alive for a moment, but quickly began to fade.

"Give me the candle," said Estelle.

"Where is it?"

"I handed it to you."

D.R. felt around his knees and leg, and in the pile of stuff he'd just dumped out. But all he could find was a broken screw driver. He held it up, looked at it, then threw it as hard as he could toward the front. "Fuck it!" he yelled, and strangled himself on the yali. It was as if something had seized his throat and choked him. Felling onto his side D.R. grabbed the handle of the side doors and threw them open, then tumbled in a heap outside into the rain. Estelle was out of her sleeping bag by the time he hit the ground.

"Honey, what's wrong?"

"I can't breathe!" he gasped. "That space in that bus . . ."

"Honey, it's fine in here. Come on back in, you're getting wet."

D.R. got to his feet and tried to wipe the mud off his knees. But that only spread it more. "What a goddamn mess."

"Get in, baby, lie down. I'll drive awhile, and you can get some sleep."

D.R. did not seem persuaded, but he obeyed. Estelle closed the door behind him, then guided him toward the far end of the mattress.

"Where's my sleeping bag?" D.R. asked.

"Get in, mine. Come on, get in."

"I want mine," he whined. "Where is it?"

"It's on the floor full of pork and beans, that's where. Now come on back here."

D.R. was too confused to argue. Estelle pulled off his sandals and got his feet pointed into the sleeping bag. He lay down inside, feeling the dark warmth of Estelle's body become his own deep in the Interior of the bag.

Understanding whole systems is knowing how to fly. You can rise above local circumstances, travel with blurring speed, and set down in a place wholly distant, strange, and wonderful. Or maybe not so wonderful, in which case you best know how to take off in a tight situation, and remember where home is.

The price you pay for the understanding is the grim knowledge of trade-offs in design. That you can have an airplane that goes fast or one that lands in 200 ft, but not both. That to save these people you may have to starve those people.

By and by you dwell in a wilderness of conflicting considerations. If you survive your wishful solutions—and there's usually margin—you may become a wily and sky-hooked metaphysician. The solutions are always meta. The means always funky field expedient.

—SB

## Dynamo and Virgin Reconsidered

Here in one sharp little book are noted many of the large-scale turns of history and culture that are visible and invisibly making in one evolutionary blink of time. Unlike most overviews, White does not concern himself with so much place of change as he does with origins and directions. His 1967 essay "The Historical Roots of Our Ecologic Crisis" (chapter 5 in this book) is already a much-reprinted classic. I suspect that Chapter 11, "The Necessity of Witches" will become one.

—SB



### Dynamo and Virgin Reconsidered

Lynn White, Jr.  
1968; 186pp.  
\$1.95 paperback  
from:  
The MIT Press  
50 Ames Street  
Cambridge, Massachusetts 02139  
or WHOLE EARTH CATALOG

From the kaleidoscopic and indelible record of mankind, we can learn clearly this: the possible range of human thought, emotion, organization, and action is almost infinite. In fact, today's organizations, we must therefore liberate ourselves from presuppositions as to what may or may not be possible. Knowledge of history frees us to be contemporary.

## The Human Use of Human Beings

A proper sequel to his *Cybernetics*, this book is social, untechnical, ultimate in most of its considerations. Its domain is the whole earth of the mind.

Norbert Wiener is one of the founders of an n-dimensional inhabited world whose nature we've yet to learn.

—SB

### The Human Use of Human Beings

Norbert Wiener  
1950, 1954; 288 pp.  
\$1.45 paperback  
from:  
Avon Books  
250 West 55th Street  
New York, N.Y. 10019  
or WHOLE EARTH CATALOG

It is the thesis of this book that society can only be understood through a study of the messages and the communication facilities which belong to it; and that in the future development of these messages and communication facilities, messages between man and machine and between machine and machine, are destined to play an ever-increasing part.

Messages are themselves a form of pattern and organization. Indeed, it is possible to treat sets of messages as having an entropy like sets of states of the external world. Just as entropy is a measure of disorganization, the information carried by a set of messages is a measure of organization. In fact, it is possible to interpret the information carried by a message as essentially the negative of its entropy, and the negative logarithm of its probability. That is, the more probable the message, the less information it gives. Clichés, for example, are less illuminating than great poems.

I believe that Ashby's brilliant idea of the unpurposeful random mechanism which seeks for its own purpose through a process of learning is not only one of the great philosophical contributions of the present day, but will lead to highly useful technical developments in the task of automation. Not only can we build purpose into machines, but in an overwhelming majority of cases a machine designed to avoid certain pitfalls of breakdown will look for purposes which can fill it.

We are not stuff that abides, but patterns that perpetuate themselves. A pattern is a message, and may be transmitted as a message.

## Perception and Change

John Platt is an astute scientist (physics, chemistry, biology) in the process of becoming an astute social inventor. He's got some novel understandings and some promising routes out of the good old over-specialized, under-diversified dead-end hole we're in... and into the green forest of what a "we" is, or an "I".

### Perception and Change

John R. Platt

\$7.95 paperback

from:  
University of Michigan Press  
615 E. University  
Ann Arbor, Michigan 48106

or WHOLE EARTH CATALOG

One reason why some fields are overstudied these days is our present system of government grants.

Enrico Fermi once said that a scientist should change fields every 10 years, that, in the first place, his ideas were exhausted by then, and he owed it to the younger men in the field to let them advance, and that, in the second place, his ideas might still be of great value in bringing a fresh viewpoint to a different field.

Why should someone not make us a single suit that would shed rain and that we could ruffle up for comfort in any weather, as a bird ruffles its feathers? A bird needs no suitcase.

Many who have made the jump to the subjective have ended by treating the objective as small and unimportant. Solipsist tyrants, believing that their will, like their eyeballs, could move mountains, have come to believe that it should triumph over these small annoying figures in their visual field.

Prophecy is rash, but it may well be that the publication of D.T. Suzuki's first *Essays in Zen Buddhism* in 1927 will seem in future generations as great an intellectual event as William of Moerbeke's Latin translations of Aristotle in the thirteenth century or Marsilio Ficino's of Plato in the fifteenth. But in Suzuki's case, the shell of the Occident has been broken through. More than we dream, we are now governed by the new canon of the globe.

Francis tried to depose man from his monarchy over creation and set up a democracy of all God's creatures. With him the act is no longer simply a homily for the lazy, flames a sign of the thrust of the soul toward union with God; now they are Brother Ant and Sister Fire, praising the Creator in their own ways as Brother Man does in his... I propose Francis as a patron saint for ecologists.



It is the great public which is demanding the utmost of secrecy for modern science in all things which may touch its military uses. This demand for secrecy is scarcely more than the mark of a sick civilization not to learn the progress of its own disease.

It is illuminating to know that the sort of phenomenon which is recorded subjectively as emotion may not be merely a useless epiphenomenon of nervous action, but may control some essential phase in learning, and in other similar processes.

—SB



Good living is with a tribe. At the Marine Biological Laboratories at Woods Hole, Massachusetts, where I have spent several summers, the boundaries between the generations seem to disappear, as well as the boundaries between work and leisure and between indoors and outdoors and between man and environment. Children and students and teachers watch barfco in and out of the laboratories, arguing science and studying the odd creatures brought up from the sea. All night they teach the fish embryos developing in the dishes, and they go out before dawn together to catch the big striped bass. The 4-year-olds solemnly examine frog, the 10-year-olds sell their catch of dogfish to the lab, the 15-year-olds listen to the DNA arguments on the beach or play squash tennis with the senior scientists.

As perception theory now suggests, each of us stands at the creative, choosing focus of a moving web of past antecedents and future consequences that branch out from our present choices and actions, propagating and amplifying themselves indefinitely. We interpenetrate the universe; it responds to our every breath.

It seems to me that the new rights for which a demand is arising in our time, I think in an irresistible way, revolve primarily around the right not to be treated as an object. We are co-subjects in our society.

It is said that after the ceremonies dedicating the great telescope on Mount Palomar, someone remarked to an astronomer, "Modern astronomy certainly makes man look insignificant, doesn't it?" To which the astronomer replied, "But man is the astronomer!"

There was a period in our own species when we needed witches and had them in enormous numbers. It began about the year 1300, ended somewhat after 1650, and is usually called the Renaissance. There was a time of tormental flux, of fearful doubt, marking the transition from the relative certainties of the Middle Ages to the new certainties which dominated the eighteenth and nineteenth centuries.

## The Next Development in Man

Books. Lancelot Law Whyte, *The Next Development in Man*. Mentor paperback, 60¢ (may be more now). Written in 1948 but still relevant. Whyte wants to change the processes of thinking from static concepts to fluid developments. In order to do this he first has to redefine the whole language to replace our usual noun-named centered ideas with verb-action-process emphasis. Most of the book is a long, head-wrenching reinterpretation of Western history, seen as the working out of what Whyte calls the universal formative principle. But where we are now represents a blocked, one-sided aspect of this principle, hence the requirement of the development of process thinking and unitary man. The failure we are living with now Whyte recognized in 1948, the value of the book is its display of a vast and essentially complete metaphysical system that is in fact a philosophic program for the future.

Cary James  
Mill Valley, Calif.

"Form is the recognizable continuity of any process." p. 15

"Anything which facilitates the development of characteristic organic form is called proper to the organism." p. 23

"The poverty of language in process concepts compels unitary thought to use [process] as noun and adjective. Formation, growth, development, destruction, decay, are process concepts; god, idea, number, matter, energy, are static concepts lacking the asymmetry of the time sequence and implying permanence." p. 27

"...the one God was a jealous God. With the ideal of unitary appeared intolerance." p. 76

"More comprehensive processes than those of the conscious mind control human destiny." p. 118

"The final elimination of the dualism can only come about through the realization that the need to formulate ideals, and in so doing split man asunder, is itself an expression of the very human but futile desire to escape the uncertainty of process and find actual security in the aim at least of a permanent harmony. Unitary man can achieve this realization, and see himself as a whole, because he is ready to accept his personal life for what it is, a transient development through changes which cannot be foreseen." p. 210-11.



## Man's Role in Changing the Face of the Earth

This book of almost 1200 pages is the result of a major conference held in 1955, sponsored by the Wenner Gren Foundation for Anthropological Research. More than 50 scholars submitted papers, covering almost every imaginable point of view related to man's capacity to transform his physical environment. Though first presented nearly 15 years ago, the facts and insights are richly rewarding today. In my opinion in fact, it is an unsurpassed achievement in assembling pertinent, insightful information of interest not only to serious students of the planet Earth, but to non-trained readers as well.

The three sections of the book are: I. "Retrospect", an historical background; II. "Process", methods and agencies involved in man's interactions with the land; and III. "Prospect", the effects and future implications of man's habitation of the Earth. Some typical subjects covered within these sections include: fire as the great force employed by man; origins and decline of woodlands; man and grass (cattle); ecology of peasant life; harvests of the seas; port channels and coast-lines; and sewerage (and not "beetle sewerage"—society is structurally around it).

This book rewards a reader like me because of its minimum of moralizing and its abundant substance. Edgar Anderson, director of the Missouri Botanical Garden in St. Louis and without whom such a book as this would be certainly incomplete, pointed out that the average thoughtful person has little inkling of how man has reclothed the world. Even professional biologists have been tardy in recognizing that a significant portion of the plants and animals surrounding us are of our own making. For example, neither Kentucky bluegrass nor Canada bluegrass is native to those places, but came from Europe. The corn belt is a very obviously man-dominated landscape, but the casual observer might never realize that even the grass covered and oak-dotted stretches of what looks like indigenous California vegetation came uninited from the Old World along with the Spaniards.

(Reviewed by Richard Raymond)

## So Human an Animal

Dubos has a combined medical and evolutionary perspective that prepares him perfectly to diagnose and prescribe for the new ills of mankind, the macro-maladies of cities and pollution and panic. Unlike other Generalist System Practitioners, he supports his thoughts with a wealth of fascinating facts and anecdotes presented with a good cheer that makes health look quite attractive.

—SB

## So Human an Animal

RENE DUBOS  
US: 609 pp.  
\$24.95 postpaid

from:  
Charles Scribner's Sons  
597 Fifth Avenue  
New York, N. Y. 10017

or WHOLE EARTH CATALOG



Generally speaking, the plants which follow man around the world might be said to do so, not because they relish what man has done to the environment, but because they can stand it and most other plants cannot.

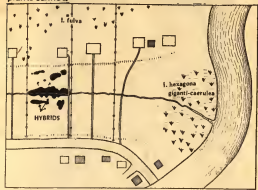


Fig. 10-3. Distribution of such vegetation as is created on new plants. (From R. Dubos, 1959.) In the far right side of the map, the plants which follow man around the world might be said to do so, not because they relish what man has done to the environment, but because they can stand it and most other plants cannot. The plants which follow man around the world might be said to do so, not because they relish what man has done to the environment, but because they can stand it and most other plants cannot. The plants which follow man around the world might be said to do so, not because they relish what man has done to the environment, but because they can stand it and most other plants cannot.

## Man's Role in Changing the Face of the Earth

William L. Thomas, Jr., ed.  
with Carl Sauer, Marston Bates, Lewis Mumford  
1956: 138 pp.

Vol. 1 \$4.75 postpaid

Vol. 2 \$5.95 postpaid

from:  
University of Chicago Press  
5801 Ellis Ave.  
Chicago, Illinois 60637

or WHOLE EARTH CATALOG



As the year 2000 approaches, an epidemic of sinister predictions is spreading all over the world, as happened among Christians during the period preceding the year 1000.

We behave often as if we were the last generation to inhabit the earth.

If the rebellious young succeed in discovering a formula of life as attractive as that of the troubadours, we may witness the twenty first century a new departure in civilization as occurred in Europe after it recovered from the fears of the tenth century. To be humanly successful, the new ages will have to overcome the present intoxication with the use of power for the conquest of the cosmos, and to rise above the simplification and degrading concept of man as a machine. The first move toward a richer and more human philosophy of life should be to rediscover man's partnership with nature.



Almost every change in environmental conditions which man can make results in some change in the water economy or water budget at the earth's surface.

The pressure for beef supply from the grasslands is very rapidly depleting the potential for protein. Where the plow went ahead of the cow, we have had to make the reduction in soil capabilities. The protein content of the wheat now grown on the eastern edge of the grassland area has been dropping decidedly. Where once it ranged from 19 to 11 percent, it is now 14-9 percent.

These are all very good ideas, but I've got something else that is very much more important. Every time you get where there is one of these populations of plants, find a large, flat rock, in the shade if necessary; sit down upon it for at least fifteen minutes by your wrist watch; and do not try to think about your clematises. Just think what a nice day it is, how pretty the flowers are, and the blue sky. Think how lucky you are to be doing this kind of work when the rest of the world is doing all the awful things they do not want to do. Just let your mind alone. Now I am not joking. Please do this, by the clock if necessary.

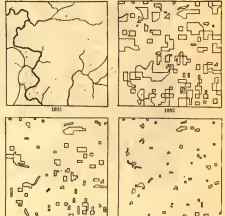


Fig. 10-3. Distribution of such vegetation as is created on new plants. (From R. Dubos, 1959.) In the far right side of the map, the plants which follow man around the world might be said to do so, not because they relish what man has done to the environment, but because they can stand it and most other plants cannot.

Considered broadly, evolution always involves learning from experience. The learning may take place by storage of genetic information in the chromosomes, by accumulation of knowledge and skills in the individual organism, or by transmission of practices and wisdom in institutions or in society as a whole.

History shows that cultures of a sort can emerge from the most improbable ways of life, provided these last long enough to become integrated into an organic whole. Today, at any rate, we find in the perplexities confronting natural scientists in the midst of their greatest triumphs the same nightmares which have haunted the philosophers from the beginning of the modern age.

## The Human Condition

At the end of a peyote meeting, in the morning, food and water are brought in by a woman designated to be Peyote Woman. Indian women are not supposed to speak up much on general subjects, and during a meeting the women are silent participants. But at dawn Peyote Woman has the floor and the power. She speaks of fundamental things like water and birth and nourishment with all the authority of the Earth and with awesome perception.

Hannah Arendt does the same in this book. Her subject is the elements of the human condition. Her perspective, the threshold of travel away from the Earth.

## The Human Condition

Hannah Arendt  
US: 385 pp.  
\$29.95 postpaid

from:  
University of Chicago Press  
1120 South Langley Ave.  
Chicago, Ill. 60608

or WHOLE EARTH CATALOG



The task and potential greatness of mortals lie in their ability to produce things—words and deeds and words—which ability deserve to be and, at least to a degree, are at home in everlastingness, so that through them mortals could find their place in a cosmos where everything is immortal except themselves.

It is true that one-man, monarchical rule, which the ancients stated to be the organizational device of the household, is transformed in society—as we know it today, when the peak of the social order is no longer formed by the royal household of an absolute ruler—into a kind of no-man rule. But this nobody, the assumed one interest of society as a whole in economics as well as the assumed one opinion of polite society in the salon, does not cease to rule for having lost its personality. As we know from the most social form of government, that is, from bureaucracy (the last stage of government in the nation-state since one-man rule in benevolent despotism and absolutism was its first), the rule by nobody is not necessarily no rule; it may indeed, under certain circumstances, even turn out to be one of its clearest and tyrannical versions.

Love, in distinction from friendship, is killed, or rather extinguished, the moment it is displayed in public. ("Never seek to tell thy love") Love that never told can be." Because of its inherent wordlessness, love can only become false and perverted when it is used for political purposes such as the change or salvation of the world.

Without attaining to standing where Archimedes wished to stand (650-320 B.C.), still bound to the earth through the human condition, we have found a way to act on the earth and within terrestrial nature as though we dispose of it from outside, from the Archimedian point. And even at the risk of endangering the natural life process we expose the earth to universal, cosmic forces alien to nature's household.

The Cartesian removal of the Archimedian point into the mind of man, while it enabled man to carry it, as it were, within himself wherever he went and thus freed him from given reality altogether—that is, from the human condition of being an inhabitant of the earth—has perhaps never been as convincing as the universal doubt from which it sprang and which it was supposed to dispel. Today, at any rate, we find in the perplexities confronting natural scientists in the midst of their greatest triumphs the same nightmares which have haunted the philosophers from the beginning of the modern age.



## QUESTIONS

Did he dream about dragons? Did he dream about deer? Did he whisper the names of friends who were near? What songs did they play, and how far away? Why did he whisper, why did he dream? What does the sound of a screen door mean? Who walks in the pasture? Who talks on the hill? Who goes to the cellar, can you feel the chill? Where does the river, when will the wind? How far are the mountains? Where do they end? Why would the church? Did the service begin? Tell me who died, and tell me who died. Help me to hide in the skin of a deer, my zipper up beg in the mouth of a stag so swiftly I go through rows of dew, it flows, it flows, it flows, it flows all over the hill where the green grass grows.

## Man and His Symbols

Carl Jung did a nice thing just before he died. He helped with a fairy tale of a princess who asks her suitors to answer a series of riddles or, perhaps, to hide themselves under her nose. If they cannot give the answers, or if she can find them, they must die—and the invariably wins. The anima in this guise involves men in a destructive intellectual game. We can notice the effect of this anima trick in all those neurotic pseudo-intellectual dialogues that inhibit a man from getting into direct touch with life and its real decisions. He reflects about life so much that he cannot live it and loses all his spontaneity and outgoing feeling.

—SB

## Man and His Symbols

Carl G. Jung  
1964; 320 pp.  
\$6.95 postpaid  
from:  
Doubleday & Co.  
501 Franklin  
Garden City, N. Y. 11531

or WHOLE EARTH CATALOG

A still more subtle manifestation of a negative anima appears in some fairy tales in the form of a princess who asks her suitors to answer a series of riddles or, perhaps, to hide themselves under her nose. If they cannot give the answers, or if she can find them, they must die—and the invariably wins. The anima in this guise involves men in a destructive intellectual game. We can notice the effect of this anima trick in all those neurotic pseudo-intellectual dialogues that inhibit a man from getting into direct touch with life and its real decisions. He reflects about life so much that he cannot live it and loses all his spontaneity and outgoing feeling.



Oh, come, lonely hunter in the stillness of dusk.  
Come, come! I miss you, I miss you!

Now I will embrace you, embrace you!

Come, come! My nest is near, my nest is near.

Come, come, lonely hunter, now in the stillness of dusk.

He throws off his clothes and swims across the river, but suddenly she flies away in the form of an owl, laughing mockingly at him. When he tries to swim back to find his clothes, he drowns in the cold river.

The sign is always less than the concept it represents, while a symbol always stands for something more than its obvious and immediate meaning.

Abstract mandalas also appear in European Christian art. Some of the most splendid examples are the rose windows of the cathedrals. These are representations of the Self of man transposed onto the cosmic plane. (A cosmic mandala in the shape of a shining white rose was revealed to Dante in a vision.) We may regard as mandalas the haloes of Christ and the Christian saints in religious paintings.



A car is another kind of possession that is usually feminized—i.e., that can become the focus of many men's anima projections. Like ships, cars are called "she," and their owners caress and pamper them like favorite mistresses.

When an individual makes an attempt to see his shadow, he becomes aware of (and often ashamed of) those qualities and impulses he denies in himself but can plainly see in other people...

If you feel an overwhelming rage coming up in you when a friend reproaches you about a fault, you can be fairly sure that at this point you will find a part of your shadow, of which you are unconscious.



The archetypal sacred marriage (the union of opposites, of the male and female principles) represented here by a 19th-century Indian sculpture of the deities Shiva and Parvati.

## Psychological Reflections

The selection and editing of paragraphs from Jung's writings by Jacoby is done with an informed sense of continuity, so that the book is readable in sequence or by bits.

—SB

## Psychological Reflections

C. G. Jung [ed. Jacoby]  
1945, 1953, 1981; 340 pp.

\$2.95 postpaid

from:  
Harper & Row  
49 East 33rd Street  
New York, N. Y. 10016

or WHOLE EARTH CATALOG

No one develops his personality because someone told him it would be useful or advisable for him to do so. Nature has never yet allowed herself to be imposed upon by well-meaning advice. Only coercion working through casual connections moves nature, and human nature also. Nothing changes itself without need, and human personality least of all. It is immensely conservative, not to say inert. Only the sharpest need is able to rouse it. The development of personality obeys no wish, no command, and no insight, but only need: it wants the motivating coercion of inner or outer necessities. Any other development would be individualism. This is why the accusation of individualism is a cheap insult when it is raised against the natural development of personality.

The man who would learn the human mind will gain almost nothing from experimental psychology. Far better for him to put away his academic gown, to say goodbye to the study, and to wander with human heart through the world. There, in the horrors of the prison, the asylum, and the hospital, in the drinking-shops, brothels, and gambling halls, in the salons of the elegant, in the exchanges, socialist meetings, churches, religious revivals, and sectarian ecstasies, through love and hate, through the experience of passion in every form in his own body, he would reap richer store of knowledge than textbooks a foot thick could give him. Then would he know to doctor the sick with real knowledge of the human soul.

A neurosis has really come to an end when it has overcome the wrongly oriented ego. The neurosis itself is not healed; it heals us. The man is ill, but the illness is an attempt of nature to heal him. We can therefore learn a great deal for the good of our health from the illness itself, and that which appears to the neurotic person as absolutely to be rejected is just the part which contains the true gold which we should otherwise never have found.

The secret of the earth is not a joke and not a paradox. We need only look to the Americas the skull and hip-measurements of all the European races become Indianized in the second generation. That is the secret of the American soul. And every soul has its secret, of which we carry an unconscious image in our souls: a relationship of spirit to body and of body to earth.

The greater the contrast, the greater is the potential. Great energy only comes from a correspondingly great tension between opposites.



It is naturally a fundamental error to believe that if we see an anti-value in a value, or an untruth in a truth, the value or the truth is then invalid. They have only become relative. Everything human is relative, because everything depends upon an inner polarity, for everything is a phenomenon of energy. And energy itself necessarily depends on a previous polarity without which there can be no energy. There must always be high and low, hot and cold, etc., so that the process of adjustment which is energy, can occur. The tendency to deny all previous values in favour of their opposites is therefore just as exaggerated as the former one-sidedness. Where generally accepted and undoubted values are suddenly thrown away, there is a fatal loss. Whoever acts in this way ends by throwing himself overboard with the discarded values.

The gigantic catastrophes that threaten us are not aleatoric happenings of a physical or biological kind, but are psychic events. We are threatened in a fearful way by wars and revolutions that are nothing else than psychic epidemics. At any moment a few million people may be seized by madmen, and then we have another world war or devastating revolution. Instead of being exposed to wild and uncontrollable and inundating waters, man is exposed today to the elemental forces of his own psyche. Psychic life is a world-power that exceeds by many times all the powers of the earth. The Enlightenment, which stripped nature and human institutions of gods, overlooked the one god of fear who dwells in the psyche. Fear of God is in place, if anyone, before the domination power of psychic life.

No doubt it is a great nuisance that mankind is not uniform but compounded of individuals whose psychic structure spreads them over a span of at least ten thousand years. Hence there is absolutely no truth that does not spell salvation to one person and damnation to another. All universalisms get stuck in this terrible dilemma.



## Anthropology Today

If revising human affairs is your concern, or adapting to harsh social/environmental changes, the anthropological perspective can be enormously useful. Much of the value of Gary Snyder, Kurt Vonnegut, Carlos Castaneda is attributed by them to their study of anthropology. When understanding spans remote cultures, it's powerful understanding, seldom chauvinistic.

This book from the Psychology Today folks will do for introduction.

**Anthropology Today**  
1971; 506 pp.

**\$12.95** postpaid

from:  
CRM Books  
1104 Camino Del Mar  
Del Mar, CA, 92014

or WHOLE EARTH CATALOG

## Tristes Tropiques

Unlike many a French thinker, Claude Lévi-Strauss has done field work. His account of tribes in Brazil galvanized budding anthropologists all over the world. Find here the elegant roots of elegant structuralism.

**Tristes Tropiques**  
Claude Lévi-Strauss  
1955; 1970; 403 pp.

**\$3.25** postpaid

from:  
Athenum Publishers  
122 E. 42nd St.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

That the object of our studies should be attainable only by continuing struggle and vain expenditures does not mean that we should set any store by what we should rather consider as the negative aspect of our profession. The truths that we travel so far to seek are of value only when we have scraped them clean of all this fungus.

## The Bible of the World

A collection of the essential writings of the eight major religions—Hindu, Buddhist, Confucianist, Taoist, Zoroastrian, Judeo-Christian, and Mohammedan. Super for dipping into as literature & poetry; more than adequate at conveying the essential sameness, rather than the differences between religious philosophies. Softly mind-expanding.

[Reviewed by Diana Shugart]

**The Bible of the World**  
Robert O. Ballou, editor  
1939; 1415 pp.

**\$12.00** postpaid

from:  
Viking Press  
625 Madison Avenue  
New York, New York 10022

(Deeth concludes his discourse)

There is that ancient tree, whose roots grow upward and whose branches grow downward—that indeed is called the Bright, that is called Brahman, that alone is called the Immortal. All worlds are contained in it, and no one goes beyond. Whatever there is, the whole world, when gone forth from the Brahman, trembles in its breath. That Brahman is a great terror, like a drawn sword. Those who know it become immortal. From terror of Brahman fire burns, from terror the sun burns, from terror Indra and Yavay, and Death, as the fifth, run away.

If a man could not understand it before the falling sounder of his body, then he has to take body again in the worlds of creation. As in a mirror, so Brahman may be seen clearly here in this body: as in a dream, in the world of the fathers; as in the water, he is seen both in the world of the Gandharvas; as in light and shade, in the world of Brahmas.

Having understood that the senses are distinct from the Atman, and that their rising and setting, their waking and sleeping, belong to their in their distinct existence and not the Atman, a wise man grieves no more.

*The Unishaded*

In heaving the wood after an axe-handle, how may you proceed? Without another axe it cannot be done.

*Confucianist Scriptures*

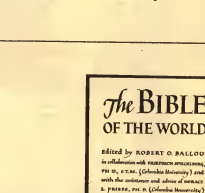
—SB



And then there was that strange element in the evolution of so many towns: the drive to the west which so often leaves the eastern part of the town in poverty and dereliction. It may be merely the expression of that cosmic rhythm which has possessed mankind from the earliest times and springs from the unconscious realization that to move with the sun is positive, and to move against it negative; the one stands for order, the other for disorder.

The ensemble of a people's customs has always its particular style; they form into systems. I am convinced that the number of these systems is not unlimited and that human societies, like individual human beings [at play, in their dreams, or in moments of delirium], never create *absolutely*: all they can do is to choose certain combinations from a repertory of ideas which it should be possible to reconstitute.

What we call 'natural' sentiments were held in great disfavour in their society: for instance, the idea of procreation filled them with disgust. Abortion and infanticide were so common as to be almost normal—to the extent, in fact, that it was by adoption, rather than by procreation, that the group ensured its continuance. One of the main objects of the warriors' expeditions was to bring back children. At the beginning of the nineteenth century it was estimated that not more than one in ten of Guisicuru group were Guisicuru by birth.



## THE BIBLE OF THE WORLD

EDITED BY ROBERT O. BALLOU  
In addition to all religious scriptures,  
FOR A NEW (Globe) Edition, with  
the introduction and index of essays  
by various, see (Globe) Editions

NEW YORK, THE VIKING PRESS, INC.

We sacrifice unto the undying, shining, swift-horsed Sun.

When the light of the sun waxed warmer, when the brightness of the sun waxed warmer, then up stand the heavenly Yazatas, by hundreds and thousands: they gather together its glory, they make its glory pass down, they pour its glory upon the earth made by Ahura, for the increase of the world of holiness, for the increase of the creatures of holiness, for the increase of the undying, shining, swift-horsed Sun. And when the sun rises up, then the earth, made by Ahura, becomes clean, the running waters become clean, the waters of the wells become clean, the waters of the sea become clean, the standing waters become clean, all the holy creatures, the creatures of the Good Spirit, become clean.

*Zoroastrian Scriptures*

Then the Lord answered Job out of the whirlwind, and said, Who is this that darknesseth counsel by words without knowledge? Gird up now thy loins like a man; for I will demand of thee, and answer thou me. Where wast thou when I laid the foundations of the earth? declare, if thou hast understanding. Who hath laid the measures thereof, if thou knowest? or who hath stretched the line upon it? Whereupon are the foundations thereof fastened? or who laid the corner-stone thereof? when the morning stars sang together, and all the sons of God shouted for joy?

*Job*

"A laughing outsider once said that anthropology is only an excuse for not specializing: a humanist remarked that a good anthropologist was the last Renaissance man. . . ."

These Anharic nomads of Ethiopia prefer the freedom of mobility to the accumulation of wealth practiced by the Danakil, with whom they trade in the village of Bati. Proud of their heritage, the Anharic invoke Owen Latimore's words, "the pure nomad is a poor nomad."

Among the modern Cree, there is conflict between the traditional Cree expectation associated with the "good man" who may counsel but never coerce and the Canadian government's expectations of a chief that he must gain compliance with their orders.

No society is perfect. Each has within itself, by nature, an impurity incompatible with the norms to which it lays claim; this impurity finds outlet in elements of injustice, cruelty, and inhumanity. How are we to evaluate those elements? The anthropological enquiry can provide the answer. For while the comparison of a small number of societies will make them seem very different from one another, these differences will seem smaller and smaller as the field of investigation is enlarged. It will eventually become plain that no human society is fundamentally good; but neither is any of them fundamentally bad; all offer their members certain advantages, though we must bear in mind a residue of iniquity, apparently more or less constant in its importance, which may correspond to a specific inertia which offers resistance, on the level of social life, to all attempts at organization.

When we make an effort to understand, we destroy the object of our attachment, substituting another whose nature is quite different. That other object requires of us another kind of attachment, and so destroys the second object and substitutes a third—and so on until we reach the only enduring Presence, which is that in which all distinction between meaning and the absence of meaning disappears; and it is from that Presence that we started in the first place. It was two thousand five hundred years since man discovered and formulated these truths. Since then we have discovered nothing new—unless it be that whenever we investigated what seemed to be a way out, we met with a further proof of the conclusions from which we had tried to escape.



EAGLE ROCK

Sometime between first light and actual sunrise Estelle turned onto a dirt road and followed it three miles to Eagle Rock State Park, where the sign said there was a campground. They really didn't have time to stop and camp. They were which-out of money and the only chance they had of getting any any time soon was in St. Louis if they could get there by Tuesday. D.R.'s buddy Biddie owed him sixty dollars. Estelle had figured it, they couldn't afford not to stop either. D.R. was getting freakier by the mile and Estelle thought she felt a cold coming on. They were both wiped out and Urge was an impossible mess. Maybe if they stopped and rested for a day, straightened up their gear and got some sun they'd both feel strong enough to make St. Louis in one more non-stop push.

There was a chain across the drive-way at the park entrance but it was easy enough to drive around it. If the ranger didn't come around later in the day to collect the camp fee, Estelle had just saved two whole dollars. It was a good saving. Stopping was the thing to do all right. As she pushed the gravelly drive-way looking among the assorted tents and trailers for a place to park, she began to feel really happy. The campground was incredibly crowded, but at least she found an empty space in the corner farthest from the river, a narrow slot between a GMC pickup with a great hulking camper rig on top, and a green Porsche parked in front of a red pup tent. There were cars all over the place, and someone had left an enormous turtling cross vases on the metal grill above the fireplace. But Estelle was glad to be somewhere in particular she didn't feel either here. She picked the shit up on a piece of cardboard and buried it under some leaves. In fifteen minutes she had most of the trash picked up, which included a plastic bag with some oldies in it good enough to vash and eat. I could even cook 'em, she told herself. Cooked apples. Goddamn. Her taste buds went to work on an image of apples steaming in a pot as she walked off in search of a restroom.

PO Box 466  
Peter Stuyvesant Station  
New York, N.Y. 10009



*One humanity, one history, one fat little book. Some familiarity with world history will not help you to avoid mistakes, but it may help you recognize them and thus move on to more original ones.* —SR

**\$4.25** postpaid  
from: University of Chicago Press  
5801 Ellis Avenue  
Chicago, Illinois 60637

*John Cage is bright, original, and cheerful. Reading him makes me feel the same. His subject these days is "How to Improve the World (You Will Only Make Matters Worse)". Practical hints, slipped past like a puck behind the goalie's back*

Everything we come across is to the point. Living underground because there was no money. Arizona land and air permitted making mounds, covering them with cement, excavating to produce rooms, providing these with skylights. For anyone approaching, the community was invisible. Cacti, desert plants: the land seemed undisturbed. Quantity (abundance) changes what's vice, what's virtue. Selfishness is out; carelessness is in. (Waste's

**A Year From Monday**  
John Cage  
1963; 167 pp.  
**\$1.95** postpaid

from:  
Wesleyan University  
Press  
Middletown, Conn.  
06457

to wait. XXXVI. Weather feels good.  
Isn't. More rain is needed. Water,  
I've tried two games, winning one, losing  
other. He was continually himself,  
totally involved in each game, unmoved  
outcome of either. What's the  
nature of his teaching? For one  
thing: devotion (practice gives evidence  
of it). For another: not just  
winning half the game but playing all of  
(having a view that includes that of  
the opponent). Suddenly a clam rose to

[illegible]

The fact that even the best laid plans for directing human affairs still often fail may turn out to be humanity's saving grace.

*Visiting Fellows at Wesleyan in 1969-70 searching Humanities in Revolution. More John Cage, Fuller, Ihab Hassan, Daniel Stern, Harold Rosenberg, etc. Substantial green intellectualizing.*

**Liberations**  
Ihab Hassan, ed.  
1971; 215 pp.  
**\$10.00** postpaid

from:  
Wesleyan University Press  
100 Riverview Center  
Middletown, Connecticut 06457  
or **WHOLE EARTH CATALOG**

Most men of fifty or so are more intimate with another revolution, with the peculiar timebound apocalypse (for so we now say) of the Thirties. There was almost pathetic testimony to this in a lecture on *The Future* held at Rutgers University in 1965, where the distinguished speaker, a young man of thirty, told us that he had just got stuck in the Thirties, as if the only true basis for prediction was in that period. I was never myself subjected to any experience comparable to that, but I do remember the work left politics, but I could understand the fixation; my late teacher, the distinguished economist, the Depression and the Spanish Civil War and the Moscow Trials and the Russian Revolution were the only things that dominated his mind. I went into this with a certain skepticism, but I was wrong. The economic predictions on which we founded our certainties of disaster and renovation were wrong and we all made, without knowing it, the same mistake. The new roles in a transformed society which now seem naive or even discredited were not, for all that, resemblances between then and now. It seemed quite clear that the crisis there would be a wholly new state of affairs, not a mere repetition of the old.

Zipf, George Kingsley.  
Human Behavior and the Principle of Least Effort,  
New York 1965. LC 65-20086  
irrefragably interdisciplinary  
irrefragably infuriating  
but where else can you find a book which contains  
a table of 'voiceless aspirated fortis  
and voiceless unaspirated lenes stops  
in present day Peipings' (p. 101)  
a discussion of 'Death as an  
economic convenience and not as a  
biological necessity' (p. 236)  
and the application of logarithmic  
functions to anything and  
everything that can be quantified  
from Joycean vocabulary to  
obituary notices in the N Y Times  
not to everybody's taste  
perhaps not to anybody's taste  
but in his own way Zipf is as  
mavericky as B. Fuller.

Alan Ritch  
Laguna Beach, CA

Once their intellectual curiosity had been aroused, Westerners discovered that the Moslems possessed a sophistication of mind and richness of learning far surpassing that available in Latin. Regular schools of translators therefore set eagerly to work to bring the treasures of Arabic learning to the Latin world. Toledo became the principal centre of this activity; but parallel work was done also at Sicily and, on a smaller scale, at Salerno, Salamanca, and Venice. The translators sought useful knowledge and were little concerned with belles-lettres. Hence they concentrated on works of medicine, mathematics, astronomy, optics, philosophy, and the poetic collections of information about the natural and supernatural world.



Men some centuries from now will surely look back upon our time as a golden age of unparalleled technical, intellectual, institutional, and perhaps even of artistic creativity. Life in Demosthenes' Athens, in Confucius' China, and in Mohammed's Arabia was violent, risky, and uncertain; hopes struggled with fears, greatness teetered perilously on the brink of disaster. We belong in this high company and should count ourselves fortunate to live in one of the great ages of the world.

People speak of literacy. But I, for one, can't read or write any computer language. Only numbers I know are those based on ten. I'm uneducated. Home in Wayzata, Minnesota's very much like a home near Stites (just south of Barcelona). Now we're itinerant there's no reason to go on, for instance, picking fruit. Since we live longer, Margaret Mead says, we can change what we do. We can stop whatever it was we promised we'd always do and do something else. CXXXIX. He is one of my closest friends.

[illegible]

It was at the Eagle Rock State Park campground that Estelle took the most delicious hot shower she'd ever had in her entire life. It was, she thought, a dream. The water pounded her neck and shoulders, and she stood up in great hot clouds of steam. "I'm taking a shower," she thought. "I'm taking a shower." And she sprayed into her mouth, the steam filled her ears and nose and seeped in at the corners of her eyes. After a night of cold rain on the road, she was glad to turn in at a room, a steam room that at five fifteen in the morning she had to get up and get out of the shower for a minute to turn on all the other showers. In the corner stall she found a brand new bar of Dial soap, and she used it. She tilted her head back and closed her eyes, and then shampooed her hair. She stayed there for a minute, and then her fingers began to wrinkle. Finally she managed to draw away from the shower stall into the cold outside, where she used her shirt for a towel. She went to the door and looked out, holding her clothes in her hand. She saw a man standing there. Not even the birds were stirring yet. Laughing out loud, Estelle slipped naked down the gravel street to clear dry floor, stopping to look back at the man. The firewood man, from a shed that was selling it on the honor system for twenty dollars a cord.



## The Year 2000

Is Herman Kahn the bad guy (as liberal opinion would have it) or a good guy (as in some informed opinion)? Kahn will hang you on that question and while you're hanging him information and scolding notions into your ambivalence. He does this best with a live audience, but this book is a fine collection of the information he uses.

Here is some of the now-basis methodology of future study—multi-fold trends, surprise-free projections, scenarios, etc. And here are their results. It's the best future-book of the several that are out.

In my opinion, it is not particularly an accurate picture of the future but the most thorough picture we have of the present—the present statistics, present fantasies, present expectations that we're planning with. We are what we think our future is.

—SB

## The Futurist

In part because the Future is a new field of methodic study, this is a lively newsletter. It reports bi-monthly on new books and programs having anything to do with social forecasting. Future study is like education: everybody thinks they're good at it. The newsletter has some of that diluted flavor, but it doesn't matter. Useful pointing at useful activities done here.

—SB

### Maslow's Hierarchy of Needs

Abraham Maslow, a Brandeis University psychologist, has postulated that all men share certain basic needs which can be arranged in a hierarchy of five levels, from the most fundamental physiological needs to the needs of intellectual and spiritual fulfillment. The five levels are:

- 1. Physiological needs:** To survive, man needs food, clothing, shelter, rest. As the imperative requirements for staying alive, these represent the most elemental needs.
- 2. Safety or security needs:** When physiological needs are satisfied, man wants to keep and protect what he has. He starts to try to stabilize his environment for the future.
- 3. Social needs:** As his environment becomes more stable, he seeks to be part of something larger than himself. He has social needs for belonging, for sharing and association, for giving and receiving friendship and love.
- 4. Ego needs:** These are the needs that relate to one's self-esteem, need for self-confidence, independence, achievement, competence, knowledge and one's reputation (needs for status, recognition, appreciation, deserved respect of one's peers).
- 5. Self-fulfillment needs:** Finally comes the need for growth, self-actualization, self-actualization. As the capture of all his other needs, man wants to realize the full range of his individual potential as a human being.

At each level, needs determine values and patterns of behavior. At the survival level, for instance, man values food, clothing and shelter most highly. It is important to note that a satisfied need is not a motivator of behavior. (Once hunger has been satisfied, it no longer has much motivating force.) Furthermore, higher level needs operate only when lower level needs continue to be met.

## Mankind 2000

Politicians seldom invent things. They respond to pressures by reaching into the current social invention bag and finding whatever looks like the most promising program for this day or day's conflict.

So who makes the inventions? A motley crew is who. Political aids, academics, business entrepreneurs, artists, liberal scientists, and occasionally a grass root and friends. Some of their thoughts get published; some purely happen.

Whether you're an inventor or a piece of the pressure, you may want to know what's in the bag so far for the rest of this century. This book has a good range of the published ideas and expectable pressures, some lovely, some harrowing, all impinging on your very own personal world to come.

—SB

### Mankind 2000

Robert Jungk, Johan Galtung, Ed. 1989; 368 pp.

\$14.90 postpaid

from:  
Universitätsforlaget  
P.O. Box 105  
Boston, Mass. 02113

or WHOLE EARTH CATALOG





# The year 2000

A FOREWORD  
FOR SPECULATION ON  
THE NEXT THIRTY-THREE YEARS

**The Year 2000**  
Herman Kahn and Anthony J. Wiener  
1967, 431 pp.  
\$9.95 postpaid

from:  
The Macmillan Company  
Front and Brown Streets  
Riverside, Burlington County  
New Jersey 08075

or WHOLE EARTH CATALOG

Describing the social implications of the year 2000, this book offers a unique and provocative look at the future. It is a collection of essays by Herman Kahn and Anthony J. Wiener, edited by Daniel Hill.

## The Futurist

\$7.50 for one year (bi-monthly)

from:  
World Future Society  
P. O. Box 10208  
20th Street Station  
Washington, D.C. 20036

### A Generation Looking for "Munich" May Be Followed by a Generation Looking for "Vietnam"

There was, once upon a time, a generation whose consciousness was formed by Munich, and that generation has been walking around looking for Munich ever since. Among them are the guys who got us into this crazy disaster in Vietnam, because they were looking for Munich and they thought they had found another one.

Try to think what it is going to mean to have millions of Americans looking for Vietnam the rest of their lives. That is: the first thing they say about an American President is: "He is probably lying to us." Not the last thing. Not the thing you come to through great suffering. But the first thing you say is: "That son-of-a-bitch is probably lying, because every American President I can ever remember has been lying to us."

That is going to cut very deep, because if you are living in a society in which a bunch just doesn't believe the government is legitimate, or think it probably isn't, and you've got to live with it, with great labor that it is, that is a very strange event in American history.

—Arthur I. Waskow

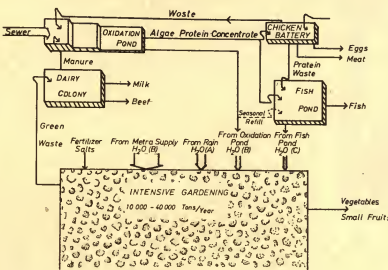


Fig. 3. Production of perishable foods in urban village (Population up to 35,000 persons)

The nearest case is the sit-in, where the civil rights movement said, "Our desirable-achievable future is that we want to be able to sit in integrated restaurants. We will not petition legislatures to require integration, we will not petition the owners of the restaurants to integrate, we will simply create the future. This is, we will integrate the restaurants, and it will rest upon those who have the power of law and the power of ownership in their hands, to decide how to respond to that creation. So we will build now what it is we want to exist in the future, and society will have to react to that. It will have to let us build it, or it will have to punish us for building it. If it punishes us for building it, we believe we can build support around that vision of the future, and can, therefore, mobilize people into action to achieve that future."

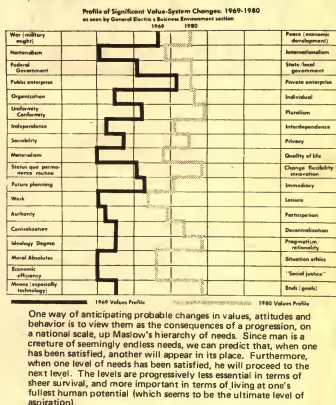
Arthur I. Waskow

### TABLE IX

- The Postindustrial (or Post-Mass Consumption) Society
1. Per capita income about fifty times the preindustrial
  2. Most "economic" activities are tertiary and quaternary (service-oriented), rather than primary or secondary (production-oriented)
  3. Business firms no longer the major source of innovation
  4. There may be more "consentives" (vs. "marketives")
  5. Effective floor on income and welfare
  6. Efficiency no longer primary
  7. Market plays diminished role compared to public sector and "social accounts"
  8. Widespread "cybernation"
  9. "Small world"
  10. Typical "doubling time" between three and thirty years
  11. Learning society
  12. Rapid improvement in educational institutions and techniques
  13. Erosion (in middle class) of work-oriented, achievement-oriented, advancement-oriented values
  14. Erosion of "nationalistic" values
  15. Sensate, secular, humanist, perhaps self-indulgent criteria become central

### Changes in value systems will be the major determinant of social, political and economic developments on the domestic scene.

It may well be that identifying value changes will become the single most important element of environmental forecasting. For, if these changes can be identified and analyzed, then it will be that much more feasible to predict the course of the major currents in our society.



One way of anticipating probable changes in values, attitudes and behavior is to view these as the consequences of a progression, on a national scale, up Maslow's hierarchy of needs. Since man is a creature of seemingly endless needs, we can predict that, when one has been satisfied, another will appear in its place. Furthermore, when one level of needs has been satisfied, he will proceed to the next level. The levels are progressively less essential in terms of their survival, and more important in terms of living at one's fullest human potential (which seems to be the ultimate level of aspiration).

We might be able to create "future gaming" centers which could offer experience in "living" alternative futures to people who are fed up with the present but have no hope for a workable or desirable society.

Arthur I. Waskow

Sewage-produced algae would be fed to chickens and fish (cattle do not need the protein) according to minor modifications of existing art in these forms of husbandry (Fig. 3).

Altogether, about two thirds or more of the weight and at least a quarter of the caloric intake of the urban diet can very likely be produced economically inside the city itself using present knowledge.

Richard L. Meier

Even in advanced countries, futurology is not necessarily identical and, moreover, can be roughly divided into three groups:

- European type
- US-Soviet type
- Japanese type

Juizio Hayashi

In the time of Antipater the Macedonian, the first water-driven mills made people ecstatic. "The Golden Age is returning!"

Silvio Cecato



All through the riots of '72 we watched, itching to leave the city but somehow still attached. I mean, we knew. We knew as early as '67, but it was so science-fiction that we just kind of dreamed happily over it, making incredibly detailed lists, playing with the Ouija Board, studying astrology and making predictions in an off-handly superior way. We got disillusioned in '68, and went on a lot of sidetraps, falling in love, losing it, moving, practicing all kinds of odd crafts, having babies. We knew what was happening by '69. We had our Whole Earth catalogs, and our stash of Acapulco and Panamanian pot seeds, and we were desperately railing bread, working, trying to get it together.

It was a communal trip at first, and gradually it got thinner, down to the family, and the family seemed to be a lot smaller than we'd thought. Government pamphlets, nightsoil, organic gardening, Diesel engines, music, meditation and chauvinism mounted. We decided to leave in secret.

All the mediums, most of the astrologers, some of the psychics, and even some political economists agreed that we were eating the earth into Armageddon. So we still waited, planning, collecting. In '73 we got into our bus and split for Oregon. We drove all night and the better part of the day, slept just in time to hear on the car radio that Red China had started bombing some body, but not us yet, thank God. We woke and drove again, through the night, and finally we got there, and fell out, exhausted. In the morning the baby started to cry.

We got up. Outside the curtained windows of our bus, through the trees and the virgin country, we saw seven tepees, three Volkswagen buses, two school buses, one Renault Dauphine with a pusp tent on top of it, a half-hewn cabin, two chemical toilets, several dogs, more cats, a fire somewhere off in the distance, and standing around us were ninety-seven people. They looked hungry. They all had long hair. Nobody was smiling.

We ate the ones over thirty first.

Later, the soldiers came.

What's wrong with this country?

from Tuesday's Child—Vol. 1, No. 1

1616 North Argyle Ave.  
Hollywood, CA 90028  
\$6/yr.

It is impossible to appeal to a neutral position to determine the rationality of competing systems, as it is to invoke a neutral voice to judge the enlightenment and universal sensibilities. To the confirmed rationalist, no-knowledge may appear to be the hugger-mugger of the mystagogue. Nevertheless, it is precisely its ineffability that lends force to its reality. The mysteries of nature appear to be mysteries only to those who refuse to participate in them.

An important difference exists between "having-no" knowledge and having "no-knowledge." The former is merely a state of ignorance and having "no-knowledge" is the positive method and the latter is the negative method. In the positive method, the user under question is intentionally pointed out and described. In the negative method, it is specifically not discussed. By not dissecting the ineffable X in question but merely restricting discourse to objects that it is not, the features of the X are revealed in our dim consciousness.

## The Emerging Japanese Superstate

After some uncomfortable years with the old cliché—*California Is The Future*—I welcome the new cliché—*Japan Is The Future*. After a visit there last year, I do believe that all futurists should do some time in industrial Japan. Not just awesome statistics, as Kahn cogently points out, but a whole national psyche is cooking there. A sense of Manifest Destiny that dwarfs Israel's. Generational conflict like and oddly unlike our own. Ecological practice far worse and far better than anyone else's. The damndest loyalties. Instinctive resource hunger. Desire for nuclear weapons. Planetary impact, and maybe leadership. It'll be nice to have California merely quaint again.

—SB

### The Emerging Japanese Superstate

Herman Kahn

1970, 274 pp.

\$7.95 postpaid hardcover

October 1971

\$2.95 paper edition

from:

Prentice-Hall, Inc.

Englewood Cliffs, N.J. 07632

or WHOLE EARTH CATALOG



## MATSUSHITA WORKERS' SONG

For the building of a new Japan,  
Let's put our strength and mind together,  
Doing our best to promote production,  
Sending our goods to the people of the world,  
Endlessly and continuously,  
Like water gushing from a fountain.  
Grow, industry, grow, grow, grow!  
Harmony and sincerity!  
Matsushita Electric!

## The Tao of Science

No high-minded bridging of East and West, this. But a successful director of research showing how valuable an informed and experienced Taoist sense of harmony can be to the conduct of science. It can help balance the scientist, and it offers an avenue to balancing the application of what the scientist learns. Good medicine for over-specialization.

—SB



The Tao of Science  
R. G. H. Su  
1957; 180 pp.

\$2.45 postpaid

from:

The M. I. T. Press  
50 Ames Street, Room 765  
Cambridge, Mass. 02142

or WHOLE EARTH CATALOG

... This all-embracing applicability of no-knowledge makes it a valuable tool for the executive. It provides him with a common ground of all situations. It is his means of transcendence over specific experience of which he has not yet tasted. Versed in no-knowledge, he is at home under otherwise strange conditions; he always finds familiar strains in his management of assorted enterprises.

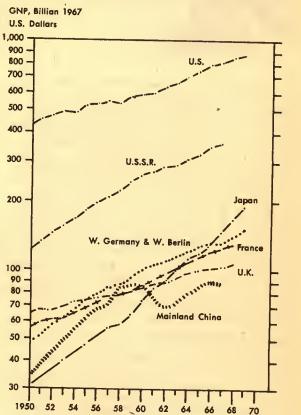
The scientific West adopts the positive method and the Taoist East the negative. In the positive method the user under question is intentionally pointed out and described. In the negative method, it is specifically not discussed. By not dissecting the ineffable X in question but merely restricting discourse to objects that it is not, the features of the X are revealed in our dim consciousness.

Communal. In nearly all activities and issues the Japanese traditionally think of themselves as members of a group, and their satisfactions are largely expected to come through group fulfillment of group objectives. In traditional Japanese culture, and to an amazing degree today, despite a nominal emphasis on democratic individuality and other erosions of traditional patterns and ties, one of the worst of all sins is to display an egotistic disregard of, disinterest in, or resistance to group mores, attitudes, taboos, totems, traditions, or objectives—or often just to display any individualism at all.

Traditionally every Japanese is part of a hierarchical structure. There are people who rank above every individual, except the Emperor and the shogun, and except for the youngest daughter of a member of the outcast Burakus, there are people beneath. To say in Japan that certain people are equal generally implies they are in equal distance from some common superior—i.e., they are equal in rank in a pyramidal hierarchical structure.

It should also be noted that in probably no place in the world but Japan are such songs sung voluntarily and for fun. Certainly not in China, where there is a grim compulsion about singing them and where pleasure and voluntarism are the last two words one would use in Vietnam. It was interesting to me that at one time the people sing such songs for an hour or two. And when the Saigon government took over the village they too made the villagers sing songs for a half hour or so. However, when the villagers were queried, "What do you want?" the answer was almost invariably, among other things, "We want to quit singing."

The point I wish to make is the contrast between the high morals of present-day Japanese culture—in at least this matter of production—and the very low morale in the West on almost all issues.



Note: Purchasing power exchange rates are used.

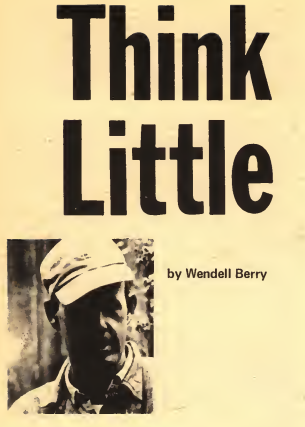


## THE LONE OUTDOORSMAN

About eight o'clock a man in a red hunting cap came out of the camper parked next to Urge and began dismounting the yellow trailbike from the front end of his GMC. He was short and overweight but you could tell by the way he wore his cap and held his pipe between his teeth that he took himself pretty seriously. His face was abnormally handsome. His face could have been in a TV ad for pipe tobacco, or a men's catalog. Probably in some previous incarnation the Lone Outdoorsman had been the best five foot, five inch high school halfback in the conference. He had on a black and green wool shirt, army boots and fatigue pants faded to a pale green. Snagging from the army web belt around his waist were a canteen, a compass, a long sheath-knife, a first aid kit, survival kit, snake bite kit, a sawing kit, and a kit to repair flat tires. He banged and rattled like a mobile hard-core stomp, and yet he smoked his pipe and worked on his bike like any neighborhood family man out waxing his car on a Sunday afternoon.

From time to time the Outdoorsman would glance over his shoulder and peer at Divine Right and Exeels through the overhanging trees. They were sitting on the ground in front of the fireplace, eating hot apples and talking quietly. He didn't mean to pry. He was just, you know, checking things out, looking to see if there was any crime going on over there among the hippies. He noticed they were both eating out of the same dish, out of a bowl that was a matter of fact. That was irregular, to be sure, but it was a matter of fact, nothing to call the Lone Outdoorsman into action yet. He glanced at the two young people every few minutes until he got the bike dismounted. Then he got on, started 'er up, and redid off to the bathroom a hundred yards away.





by Wendell Berry

First there was Civil Rights, and then there was The War, and now it is The Environment. The first two of this sequence of causes have already risen to the top of the nation's consciousness and declined somewhat in a remarkably short time. I mention this in order to begin with what I believe to be a justifiable skepticism. For it seems to me that the Civil Rights Movement and the Peace Movement, as popular causes in the electronic age, have partaken far too much of the nature of fads. Not for all, certainly, but for too many they have been the fashionable politics of the moment. As causes they have been undertaken too much in ignorance; they have been too much simplified; they have been powered too much by impatience and guilt of conscience and short-term enthusiasm, and too little by an authentic social vision and long-term conviction and deliberation. For most people those causes have remained almost entirely abstract; there has been too little personal involvement, and too much involvement in organizations which were insisting that other organizations should do what was right.

There is considerable danger that the Environment Movement will have the same nature: that it will be a public cause, served by organizations that will self-righteously criticize and condemn other organizations, inflated for a while by a lot of public talk in the media, only to be replaced in its turn by another fashionable crisis. I hope that will not happen, and I believe that there are ways to keep it from happening, but I know that if this effort is carried on solely as a public cause, if millions of people cannot or will not undertake it as a *private* cause as well, then it is *sure* to happen. In five years the energy of our present concern will have petered out in a series of public gestures, and no doubt in a series of empty laws—and a great, and perhaps the last, human opportunity will have been lost.

It need not be that way. A better possibility is that the movement to preserve the environment will be seen to be, as I think it has to be, not a digression from the civil rights and peace movements, but the logical culmination of those movements. For I believe that the separation of these three problems is artificial. They have the same cause, and that is the mentality of greed and exploitation. The mentality that exploits and destroys the natural environment is the same that abuses racial and economic minorities, that imposes on young men the tyranny of the military draft, that makes war against peasants and women and children with the indifference of technology. The mentality that destroys a watershed and then panics at the threat of flood is the same mentality that gives institutionalized insult to black people and then panics at the prospect of race riots. It is the same mentality that can mount deliberate warfare against a civilian population and then express moral shock at the logical consequence of such warfare at My Lai. We would be fools to believe that we could solve any one of these problems without solving the others.

To me, one of the most important aspects of the environmental movement is that it brings us not just to another public crisis, but to a crisis of the protest movement itself. For the environmental crisis should make it dramatically clear, as perhaps it has not always been before, that there is no public crisis that is not also private. To most advocates of civil rights racism has seemed mostly the fault of someone else. For most advocates of peace the war has been a remote reality, and the burden of the blame has seemed to rest mostly on the government. I am certain that

these crises have been more private, and that we have each suffered more from them and been more responsible for them, than has been readily apparent, but the connections have been difficult to see. Racism and militarism have been institutionalized among us for too long for our personal involvement in those evils to be easily apparent to us. Think, for example, of all the Northerners who assumed—until black people attempted to move into their neighborhoods—that racism was a Southern phenomenon. And think how quickly—one might almost say how naturally—among some of its members the peace movement has spawned policies of deliberate provocation and violence.

But the environmental crisis rises closer to home. Every time we draw a breath, every time we drink a glass of water, every time we eat a bit of food we are suffering from it. And more important, every time we indulge in, or depend on, the wastefulness of our economy—and our economy's first principle is waste—we are causing the crisis. Nearly every one of us, nearly every day of his life, is contributing directly to the ruin of this planet. And the protest meeting on the issue of environmental abuse is not a convocation of accusers, it is a convocation of the guilty. That realization ought to clear the smog of self-righteousness that has almost conventionally hovered over those occasions, and let us see the work that is to be done.

In this crisis it is certain that every one of us has a public responsibility. We must not cease to bother the government and the other institutions, to see that they never become comfortable with easy promises. For myself, I want to say that I hope never again to go to Frankfort to present a petition to the governor on an issue so important and so menacing, only to be dealt with by some ignorant functionary—as several of us were not so long ago, the governor himself being "too busy" to receive us. Next time I will go prepared to wait as long as necessary to see that the petitioners' complaints and arguments are heard *fully*—and by the governor. And then I will hope to find ways to keep those complaints and arguments from being forgotten until something is done to relieve them. The time is past when it was enough merely to elect our officials. We will have to elect them and then go and wait for them and keep our hands on them, the way the coal companies do. We have made a tradition in Kentucky of putting self-servers, and worse, in charge of our vital interests. I am sick of it. And I am sick of the change in the government of Frankfort to a less comfortable place. I believe in American political principles, and I will not sit idly by and see those principles destroyed by sorry practice. I am ashamed and deeply distressed that American government should have become the chief cause of disaffection with American government.

And so when the government in Frankfort again proves too stupid or too blind or too corrupt to see the plain truth and to act with simple decency, I intend to be there, and I trust that I won't be alone. I hope, moreover, to be there, and with a sign or a slogan or a button, but with the facts and the arguments of the case in my mind. I think that there is no higher than the level of slogans is only a crowd. But a crowd that understands the reasons for its discontent and knows the remedies is a vital community, and it will have to be reckoned with. I would rather go before the government with two men who have a common understanding of an issue, and who therefore deserve a hearing, than to go with two thousand who are vaguely dissatisfied.

But even the most articulate public protest is not enough. We don't live in the government or in institutions or in our public utterances and acts, and the environmental crisis has its roots in *our lives*. By the time token, environmental health will also be rooted in our lives. That is, I take it, simply a fact, and in the light of it we can see how superficial and foolish we would be to think that we could correct what is wrong merely by tinkering with the institutional machinery. The changes that are required are fundamental changes in the way we are living.

What we are up against in this country, in any attempt to involve private responsibility, is that we have nearly destroyed private life. Our people have given up their independence in return mostly for the cheap seductions and the cheap merchandise of so-called consumerism. We have delegated all our vital functions and responsibilities to salesmen and agents and bureaus and experts of all sorts. We cannot feed or clothe ourselves, or entertain ourselves, or communicate with each other, or be charitable or neighborly or loving, or even respect ourselves, without recourse to a merchant or a corporation or a public service organization or an agency of the government or a style-setter or an expert. Most of us cannot think of dissenting from the opinions or the actions of one organization without first forming a new organization. We are going around these days in uniform, handing out the party line on individualism. Dissenters want to publish their personal opinions over a thousand signatures.

The Confucian Great Digest says that the "chief way for the production of wealth" (and he is talking about real goods, not money) is "that the producers be many and that the consumers be few." But in this country, where we have rebellion of the young against the materialism of the affluent society, the consumer mentality is too often still intact: the standards of behavior are still those of kind and quantity, the security sought is still the security of numbers, and the chief motive is still the consumer's anxiety that he is missing out on what is "in." In this state of total consumerism—which is to say of helpless dependence

on things and services and ideas and motives that we have forgotten how to provide ourselves—all meaningful contact between ourselves and the earth is broken. We do not understand the earth either in terms of its fertility or what it requires of us, and I think it is the rule that people inevitably destroy what they do not understand. Most of us are not directly responsible for strip mining and extractive agriculture and other forms of environmental abuse. But we are guilty nevertheless, for we connive in them by our ignorance. We are ignorantly dependent on them. We do not know enough about them; we do not have a particular enough sense of their damage. Most of us, for example, not only do not know how to produce the best food in the best way—we don't know how to produce any kind in any way. And for this condition we have elaborate rationalizations, instructing us that dependence for everything on somebody else is efficient and economical and a scientific miracle. I say, instead, that it is madness, mass produced. A man who understands the weather only in terms of golf is participating in a chronic public insanity that either he or his descendants will be bound to realize as suffering. I believe that the death of the world is in progress in such minds much more certainly and much faster than in any political capital or atomic arsenal.

For an index of our loss of contact with the earth we need only to look at the condition of the American farmer—who must in our society, as in every society, enact man's dependence on the land, and his dependence on it. In an age of unparalleled affluence and leisure, the American farmer is harder pressed and harder worked than ever before; his margin of profit is small, his hours long; his outlays for land and equipment and the expenses of maintenance and operation are growing rapidly greater; he is in constant contact with industry for labor; he is being forced more and more to depend on the use of destructive chemicals and on the wasteful methods of haste and anxiety. As a class, farmers are one of the despised minorities. So far as I can see farming is considered marginal or irrelevant to the economy of the country, and farmers, when they are thought of at all, are thought of as hicks and yokels, whose lives do not fit into the modern scene. The average American farmer is now an old man, whose sons have moved away to the cities. His knowledge, and his intimate connection with the land are about to be lost. The small independent farmer is going the way of the small independent craftsman and storekeeper. He is being forced off the land into the cities, his place taken by absentee owners, corporations, and machines. Some would justify all this in the name of efficiency. As I see it, it is an enormous social and economic and cultural blunder. For the small farmers who lived on their farms *cared* about their land. And given their established connection to their land—which was often hereditary and traditional as well as economic—they could have been encouraged to care for it more competently than they have so far. The corporations and machines that replace them will never be bound to the land by the sense of birthright and continuity, or by the love which enforces care. They will be bound by the rule of efficiency which takes thought only of the volume of the year's produce, and takes no thought of the slow increment of the life of the land, not measurable in pounds or dollars, which will assure the livelihood and the health of the coming generations.

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necessary changes in themselves, on their own.

For most of the history of this country our motto, implied or spoken, has been "Think Big." I have come to believe that a better motto, and an essential one now, is "Think Little." That implies the necessary change of thinking and feeling, and suggests the necessary work. Thinking Big has led us to the two biggest and cheapest political dodges of our time: plan-making and law-making. The lost eaters of this era are in Washington D.C., "Think Big." Somebody comes up with a problem, and somebody in the government comes up with a plan or a law. The result, mostly, has been the persistence of the problem, and the enlargement and enrichment of the government.

But the discipline of thought is not generalization; it is detail, and it is personal behavior. While the government is "studying" and funding and organizing its Big Thought, nothing is being done. But the citizen who is willing to think little, and, accepting the discipline of that, to go ahead on his own, is already solving the problem. A man who is trying to live as a neighbor to his neighbors will have a lively and practical understanding of the work of peace and brotherhood, and let there be no mistake about it—he is doing that work. A couple who make a good life, marriage, and raise healthy, morally-competent children are serving the world's future more directly and surely than any political leader, though they never utter a public word. A good farmer who is dealing with the problem of soil erosion on an acre of ground has a sounder grasp of the problem, and cares more about it, and is probably doing more to solve it than any bureaucrat who is talking about it in general. A man who is willing to undertake the discipline and the difficulty of mending his own ways is worth more to the conservation movement than a politician who is insisting merely that the government and the industries mend their ways.

If you are concerned about the proliferation of trash, then by all means start an organization in your community to do something about it. But before—and while—you organize, pick up some cans and bottles yourself. That way, at least, you will assure yourself and others that you mean what you say. If you are concerned about air pollution, help push for government controls, but drive your car less, use less fuel in your home, join the Sierra Club, write the damming of wilderness rivers, join the Sierra Club, write to the government, but turn off the lights you're not using, don't install an air conditioner, don't be a sucker for electrical gadgets, don't waste water. In other words, if you are fearful of the destruction of the environment, then learn to quit being an environmental problem yourself. In one way or another, and the remedies are not difficult, obvious, though they certainly will always be difficult. They require a new kind of life—harder, more laborious, poorer in luxuries and gadgets, but also, I am certain, richer in meaning and more abundant in real goods. To have a healthy environment we will all have to give up things we like; we may even have to give up things we have come to think of as necessities. But to be fearful of the unwilling and yet unwilling to pay for the cure is not just to be hypocritical; it is to be doomed. If you talk a good line without being changed by what you say, then you are not just hypocritical and doomed; you have become an agent of the disease. Consider, for an example, the President, who advertises his grave concern about the destruction of the environment and who turns up in the air conditioner to make it cool enough to build a fire.

Odd as I am sure it will appear to some, I can think of no better form of personal involvement in the cure of the environment than that of gardening. A person who is growing a garden, if he is growing it organically, is improving a part of the world. He is producing something to eat, which makes him somewhat independent of the grocery store, but he is also enlarging, for himself, the meaning of food and the pleasure of eating. The food he grows will be fresher, more nutritious, less contaminated by poisons and preservatives and dyes, than what he can buy at the store. By reducing the trash problem; a garden is not a disposable container, and it will digest and re-use its own wastes. If he enjoys working in his garden, then he is less dependent on an automobile or a merchant for his transportation. It is involving himself directly in the work of feeding people.

If you think I'm wandering off the subject, let me remind you that most of the vegetables necessary for a family of four can be grown on a plot of forty by sixty feet. I think we might see in this an economic potential of considerable importance, since we now appear to be facing the possibility of widespread famine. How much food could be grown in the dooryards of cities and suburbs? How much could be grown along the extravagant rights-of-way of the interstate system? Or how much could be grown, by the intensive practices and economies of the small farm, on so-called marginal lands? Louis Bromfield liked to point out that the people of France survived crisis after crisis because they were a nation of gardeners, who in times of want turned to great skill to their own small plots of ground. And F. H. King, an agricultural philosopher who traveled extensively in the Orient in 1907, talked to a Chinese farmer who supported a family of twelve, "one donkey, one cow, ... and two pigs on 2.5 acres of cultivated land"—and who did this, moreover, by agricultural methods that were sound enough organically to have sustained his land in prime fertility through several thousand years of such use. These are possibilities that are very readily apparent and attractive to minds that are prepared

to think little. To Big Thinkers—the bureaucrats and businessmen of agriculture—they are quite simply invisible. But intensive, organic agriculture kept the farms of the Orient thriving for thousands of years, whereas extensive—which is to say, exploitive or extractive—agriculture has critically reduced the fertility of American farmlands in a few centuries or even a few decades.

A person who undertakes to grow a garden at home, by practices that will preserve rather than exploit the economy of the soil, has set his mind decisively against what is wrong with us. He is helping himself in a way that dignifies him, and that is rich in meaning and pleasure. But he is doing something else that is more important: he is making vital contact with the soil and the weather on which his life depends. He will no longer look upon rain as an impediment of traffic, or upon the sun as a holiday decoration. And his sense of man's dependence on the world will have grown precise enough, one would hope, to be politically clarifying and useful.

What I am saying is that if we apply our minds directly and competently to the needs of the earth, then we will have begun to make fundamental and very necessary changes in our minds. We will begin to understand and to mistrust and to change our wasteful economy, which markets not just the produce of the earth, but also the earth's ability to produce. We will see that beauty and utility are alike dependent upon the health of the world. But we will also see through the fads and the fashions of protest. We will see that war and oppression and pollution are not separate issues, but are aspects of the same issue. Amid the outcries for the liberation of this group or that, we will know that no person is free except in the freedom of other persons, and that man's only real freedom is to know and to act in accordance with the laws of the earth. And we will know that all issues in education the issue of relevance is the phonetic. If life were as predictable and small as the talkers of politics and the large in the world would be a consideration. But life is large and surprising and mysterious, and we don't know what we need to know. When I was a student I refused certain subjects because I thought they were irrelevant to the duties of a writer, and I have had to take them, clumsily and late, to understand my duties as a man. What we need in education is not relevance, but abundance, variety, adventurousness, thoroughness. A student should suppose that he needs to learn everything he can, and he should suppose that he will need to know much more than he can learn.

But the change of mind I am talking about involves not just a change of knowledge, but also a change of attitude toward our essential ignorance, a change in our bearing in the face of mystery. The principle of ecology, if we will take it to heart, should keep us aware that our lives depend upon other lives and upon processes and energies in an interlocking system which, though we can destroy it completely, we can neither fully understand nor fully control. And our great dangerousness is that, locked in our selfish and myopic economics, we have been willing to change or destroy far beyond our power to understand. We are not humble enough or reverent enough.

Some time ago I heard a representative of a paper company refer to conservation as a "no-return investment." This man's thinking was exclusively oriented to the annual profit of his industry. Circumscribed by the demand that the profit be great, he simply could not be answerable to any other demand—not even to the obvious needs of his own children.

Consider, in contrast, the profound ecological intelligence of Black Elk, "a holy man of the Ogala Sioux," who in telling his story said that it was not his own life that was important to him, but what he had shared with all life: "It is the story of all life that is holy and it is good to tell, and of us two-legged sharing in it with the four-legged and the wings of the air and all green things. . . And of the great vision that came to him when he was a child he

said: "I saw that the sacred hoop of my people was one of many hoops that made one circle, wide as daylight and as starlight, and in the center grew one mighty flowering tree to shelter all the children of one mother and father. And I saw that it was holy."

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Wendell Berry's newest book of poems, *Farming: A Hand Book*, has just been published by Harcourt, Brace and Jovanovich. The *Hidden Word*, a short-length essay about racism, will be published by Houghton Mifflin late this fall.

Think Little was originally presented as an Earth-Day speech last April. It was previously published in blue-tail fly, a Kentucky underground newspaper.

blue-tail fly  
210 W. Third St.  
Lexington, Ky. 40507  
Published monthly, 25 cents a copy

Photos accompanying Think Little by James Baker Hall.



# MANIFESTO: THE MAD FARMER LIBERATION FRONT

For Jack and Mary Jo

Love the quick profit, the annual raise,  
vacation with pay, the money  
of everything ready made. Be afraid  
to know your neighbors and to die.  
And you will have a window in your head.  
Not even your future will be a mystery  
any more. Your mind will be punched in a card  
and shut away in a little drawer.  
When they want you to buy something  
they will call you. When they want you  
to die for profit they will tell you know.  
So, friends, every day do something  
that won't compute. Love the Lord.  
Love the world. Work for nothing.  
Take all that you have and be poor.  
Love someone who does not deserve it.  
Denounce the government and embrace the flag.  
Hope to live in that free  
republic for which it stands.  
Give your approval to all you cannot  
understand. Praise ignorance; for what man  
has not encountered he has not destroyed.  
Ask the questions that have no answers.  
Invent the millennium. Plant sequoias.  
Say that your main crop is the forest  
that you did not plant  
and that you will not live to harvest.  
Say that the leaves are harvested  
when they have rotted into the mold.  
Call that profit. Prophesy such returns.  
Grow your faith in the two inches of humus  
that will build under the new every thousand years.  
Listen to carnival—put your ear  
close, and hear the faint chattering  
of the songs that are to come.  
Expect the end of the world. Laugh.  
Laughter is immeasurable. Be joyful  
though you have considered all the facts.  
So long as women last, put on  
great power, please women more than men.  
Ask yourself: Will this satisfy  
a woman satisfied to bear a child?  
Will this disturb the sleep  
of a woman near to giving birth?  
Go with your love to the fields.  
Lie on the grass. Rest your head  
in her lap. Swear allegiance  
to what is nearest your thoughts.  
As soon as the generals and the politicians  
can predict the motions of your mind,  
lose it. Leave it as a sign  
to mark the false trail, the way  
you did not go. Be like the fox  
who makes more tracks than necessary,  
some in the wrong direction.  
Practice resurrection.

—Wendell Berry

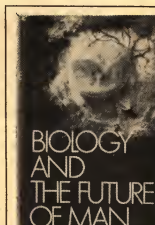


## Biology and the Future of Man

Where are we today technologically (and thus politically) is largely the product of several specific scientific revolutions that gathered steam early in the century—most notably mass medicine, nuclear physics, and investigation of materials. Since World War II the Information Sciences (computers, cybernetics, organization theory) have wrought considerable havoc and promise. Now we're in for biology, says everybody, probably right. Molecular biology, already mature, has only begun to hit the fan. Ecology, though in great demand, has short supply so far. The glamour light, long in molecular biology, may now be migrating into brain science, the very heart of darkness. Still waiting for systematic study is the big version of brain science. The participation of consciousness in evolution.

This book probably supports few of my assertions above. It is an authoritative up-to-the-year report on the state of biology by the leading biologists, with emphasis on unanswered questions and promising leads and possible impact of all this on the society in the near future. It's a heavy book, implying no lightsome future. Technology marches on, over you or through you, take your choice.

—SB



### Biology and the Future of Man

Philip Handler, ed.  
1979, 936 pp.

\$4.95 postpaid

from:  
Oxford University Press, Inc.  
1800 Portland Drive  
Fair Lawn, N.J. 07410

or WHOLE EARTH CATALOG

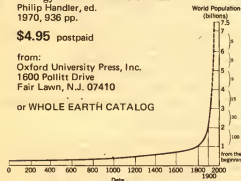


Figure 20-2. World Population Growth (Projected with assumption of constant fertility levels and declining mortality).

... any desired number of genetic twins could be produced. It would require the collection of unfertilized eggs from the oviducts of many women, removal of the egg nuclei, and replacement by the nuclei of body cells of the chosen man or woman. This would be followed by return of the eggs to the uterus of women who then would undergo normal pregnancies. In this way one could produce multiple identical copies of any person judged desirable.

At the present moment of extremely dangerous population growth, social pressures are best directed to lower reproduction, in general, without qualitative considerations. But one day, when populations are stable, world peace is the norm, and man's social and political institutions are sufficiently mature to assure that biological understanding will not be utilized to perpetuate injustice or strengthen dictatorship but, rather, to expand human potential, man will be free to guide his own evolutionary destiny. ... Man's view of himself has undergone many changes. From a unique position in the universe, the Copernican revolution reduced him to an inhabitant of one of many planets. From a unique position among the millions of other species which evolved from one another. Yet, *Homo sapiens* has overcome the limitations of his origin. He controls the vast energies of the atomic nucleus, moves across his planet at speeds barely below escape velocity, and can escape when he so wills. He communicates with his fellows at the speed of light, extends the powers of his brain with those of the digital computer, and influences the numbers and genetic constitution of virtually all other living species. Now he can guide his own evolution. In him, Nature has reached beyond the hard regularities of physical phenomena. *Homo sapiens*, the creation of Nature, has transcended her. From a product of circumstances, he has risen to responsibility. At last, he is Man. May he behave so!

## The Second Genesis

What I like about the threat of total human control in the near future is that it obliges us to figure out fast what we are about. We got the power; here comes the responsibility. Whether you prefer to embrace it, or flee it (some should, for safeguard), or stay trembling where you are, you might as well have some detailed idea of what's before you.

This book, by the Science Editor at LIFE, does good journalism on three spooky areas: Refabrication of the Individual; Exploration of Prenativity; Control of the Brain and Behavior.

Hypothesis: changes this radical outdistances the laws but not the economy. Control diminishes for governments and increases for consumers. The outlaw area of rapid change. Witness dope.

—SB

Coming: The control of life. All of life, including human life. With man himself at the controls.

Also coming: a new Genesis—The Second Genesis. The creator this time around—man. The creation—again, man. But a new man. In a new image. A whole series of new images. What will the new images be?

They will have to be quite different from the images we have known—the images that had led us to Vietnam, to turbulent racial conflict, to nuclear confrontation, to the threat of a polluted and overpopulated planet.

But all these things have come about—have they not?—with man at the controls, more or less. If he is acquiring awesome new powers—and he is—with immeasurably greater controls, does this not accelerate us all, at uncontrollable G's, toward the inevitable Dead End—a hundred bangs, followed by three billion whimpers?

If we believe so, yes.

But man's new images may offer us surprising alternatives. Their creation will require the energetic projection of the best minds of the race to the farthest reaches of their imaginations.

Any effort?

Nothing but. What we believe about man, what we want for man, will profoundly influence what actually happens to him.

What would you like: Education by injection? A catalog of spare body parts? A larger, more efficient brain? A cure for old age? Immortality through freezing? Parentless children? Custom-order body size and skin color? The ability to convert sunlight directly into energy, just as plants do, without using food as an intermediary? Name it, and somebody is seriously proposing it.

## Jarfalla: City of the Future

STOCKHOLM—The first city of the future will be built in Sweden. It will be called Jarfalla, have about 100,000 residents, and be accessible by subway or highway from Stockholm, just 12 miles away. No gasoline-powered vehicles will be allowed. Noiseless electric minibuses moving at a soothing 20 miles per hour will pass within 150 yards of everyone's house, carrying passengers and baggage free. Rolling platforms something like horizontal escalators will carry downtown shoppers on their rounds, underground herring will melt snow as it falls to the sidewalks, garbage will be collected by vacuums installed in each residence and transported through tunnels by compressed air to incinerators 30 miles away. Heat and hot water will be supplied by a single thermomolecular plant, the temperatures regulated by individual thermostats. The water will be pure, the smog-free light dazzling, the water delicious and wholesome, the streets impeccable, the only sounds those of music and children at play. It will cost an enormous amount of money.

Alas, we cannot be all Swedes, nor can all Swedes live in Jarfalla. By the time there are 7 billion of us milling around the planet, 30 years from now—or 9 billion, 20 or 30 years from now—our lives are likely to be arranged quite differently. Urbanologists hold out a considerable range of repellent prospects.

Among the most cheerful is Nigel Calder, former editor of New Science in England, whose ideas go something like this:

Those of us still living on land may be enclosed in anything from towns of 50,000 completely under glass to supercities of 50 million commanding nearly a million square miles—the size of Western Europe. But the majority of the human race will be settled on the sea, in floating towns reaching deep under water so that disturbance due to surface winds and waves—seasickness, that is—will be negligible. More likely than not, these towns will take the form of icebergs, ice being unsmokable, easily landscapeable, and relatively cheap to make and preserve (one doesn't like to think of a possible power failure, but Mr. Calder assures us we needn't worry). The icebergs would be protected against wind by geodetic domes, perfumed and decorated by thoughtfully contrived sights and sounds, air-conditioned to a year-round springlike temperature, and supplied with food by ocean gardens grown either on imported soil or in enclosed and cultivated tanks of sea water.

In sober scientific circles today, there is hardly a subject more commonly discussed than man's control of his own heredity and evolution. And the discussions seldom leave one wondering that man will acquire this control. It is a matter of when, not if.

The late Dr. J. B. S. Haldane, always intrigued by the bizarre, wrote in 1948: "If King Charles VI's or King Louis XIV's head had been stuck within a minute or so [after their executions] on a pump which supplied oxygenated blood to it, it would almost certainly have come around, after half an hour or so, enough to open its eyes and move its lips, and would probably have recovered consciousness. I hope that I have an inoperable cancer this experiment will be tried on me."

Could anyone ever replace a dead-but-frozen liver? As billions of people were frozen in every generation, the dead would ultimately own all the property and hold all the important offices. Barring the return of some sort of ancestor worship or a cult of the dead, would the unfrozen population put up with it? With life so overabundant and so easy to produce anew, why should anyone want to go to all the trouble and expense of reviving all that competition? Those piled-up frozen corpses might in fact be fireably useful to the planet because desperately overpopulated, with prevailing undernourishment and contempt for life, their very presence might even encourage a drift toward cannibalism.

"There is no doubt," says Richard R. Lander in *Man's Place in the Biosphere*, "that machines as a group will dominate man as a group, and eventually, individual machines will dominate individual men."

"By dominate I mean control, regulate, restrain, influence, pervade, direct, guide, prescribe, etc., by virtue of superiority in all aspects of tasks demanding a leader."



### The Second Genesis

Albert Rosenberg

1969, 327 pp.

\$6.95 postpaid

from:  
Prentice-Hall  
Englewood Cliffs  
N. J. 07632

or WHOLE EARTH CATALOG

Limited as such nourishment may be to the palate, we might go down on our knees in gratitude for it, considering the possible alternatives. About 4 or 5 billion people would be facing starvation, few of us could permit ourselves the luxury of real fruit and vegetables (a cucumber, say, or a watermelon). Scientists have discovered that yeast can be grown on petroleum, vast quantities of this cheap protein source can be grown to feed animal families destined in turn to feed us. Three main production lines for animal protein would then operate side by side.

In one, cattle, pigs and poultry would be raised on plant material for meat and eggs. In another, milk would be formed continuously by a culture of milk-producing glands, intended for drinking and making butter and cheese. In a third, beef, muscle would grow continuously in long tubes, extruding itself by chopping into steak-like portions. A complex of smaller works would turn out a selection of prepared foods—soups, sausage, bread, beer and so on—for national or regional distribution. Vitamins and flavors from national supplies would be added as required. Orange and lemon juice could be produced from cultures, with chemical processing of fibrous materials to add "bite." The very rich could buy natural fruit and vegetables from millionaire market-gardeners; the very poor could sustain life with combinations of plant and yeast materials reinforced with vitamins—comparable, perhaps, to having all of one's meals supplied by a domestic airline, with vitamins added. Mr. Calder does not go very deeply into the psychological side-effect of all this.

If the effects on human beings may not be altogether foreseeable, we are already getting some idea of what may happen to the animals we are raising on, nutritionally speaking. The latest method of pig-raising, for instance, already makes use of the production line, the pigs arrayed in rows before conveyor belts moving at a carefully calculated pace with carefully dosed food rations designed for optimum fattening at minimum cost. The hitch is an inclination on the pig's part to go crazy; thus, the otherwise automated system requires a highly paid attendant whose only function is to watch for early symptoms of insanity and snatch the unfortunate patient from his place at the conveyor belt, replacing him with another animal in appearance, within five minutes at most, before all the rest go wild.

—Times/Post News Service

## Moving On

One early evening in my senior year at Holy Cross College, Worcester, Mass., just before stepping onto the crosswalk into Loyola Hall, I stopped suddenly. Like lightning, I "wanted a vent"—a big one, sharp, and jagged. I wanted to swallow the whole wide world in one gulp. To get to the last alley in the world and meet the last person walking in it. Ah sol!

Frankly, I haven't pulled it off. But I've tried.

At least, the looking has made me lean, as in a needle with a hole in it. My eyes have gone gimlet, legs gone skinny. Add New England bones, 4 years in the tree desert, a dozen years in the Great Tramp Terrific and I'm ready to go to the Pacific. No matter how you mix it, it comes out a slim stick.

You say—like you really cared—"What in the world have you been looking for?"

"Don't laugh. I'll tell you. A horse. A horse named Freedom." Freedom, says Mathew Arnold, "is a horse but a horse is meant to go somewhere." He sure is, has."

When I stood years ago in front of Loyola Hall with my mouth open, I was not an easy trot. Long since he'd finished his pioneer walk from Plymouth Rock to the Pacific, dragging that covered wagon behind him. At a reward for that Grand Tour, the people built him a great Tramp Terrific and he's been trotting to the Pacific on a big red barn. That kind of pioneer paradise can now be produced by a pushbutton.

## Challenge for Survival

Jesus, there are a lot of ecological anthologies coming out. This one's value is that it focuses on the devil himself. The city.

—SB

### Challenge for Survival

Pierre Dansereau, ed.

1970, 235 pp.

\$2.75 postpaid

from:

Columbia University Press

640 West 110th Street

New York, N. Y. 10025

or WHOLE EARTH CATALOG

What will be left of the plant world if we allow the basically village culture, founded on a close symbiotic partnership between man and plants, to disappear? For some twelve thousand years, all the higher achievements of civilization have rested on this culture, one devoted to the constructive improvement of the habitat and the loving care of plants—their selection, their nurture, their breeding, their employment. That culture, in its degradation, originally made some of its best discoveries in breeding by being equally concerned with the color, the odor, the taste, the flower and leaf patterns, the sexual functions, and the nutritive qualities of plants, valuing them not only for food and medicine, but for esthetic delight. There are plenty of people working in scientific laboratories today who, though they may still call themselves biologists, have no knowledge of this culture, except by vague hearsay, and no respect for its achievements. They dream of a world composed mainly of synthetics and plastics, in which no creatures above the rank of algae or yeasts would be encouraged to grow.

## The View from the Barrio

What a refreshment this book was after reading a handful of "future" books—scholarly radical technological infatuated prophetic advice gas—which left me with a depressed feeling that the future is just words.

The real future will be made of much that is reported in this book (and approximately unknown to the scholars). Namely rural Third World people in newly rich economies and new planned cities, subverting the planners and transforming their own lives.

La Jaja is a barrio in the planned Venezuela city of Ciudad Guayana. Dr. Peattie was there for 2½ years with his family, taking part in barrio life and paying structured attention to what was going on. Social life around bar was loose, fluid to a swiftly changing environment and economy. People were self-organizing only around critical community issues such as water or sewers. From the barrio it was a huge impassable distance to the planners, so when something came down that was intolerable they would be futilely for a while and then plant dynamite under it. Nothing romantic. Just making do, getting by.

It dynamited my depression.

—SB

### The View from the Barrio

La J. Peattie

1968, 147 pp.

\$1.95 postpaid

from:

The University of Michigan Press

615 East University

Ann Arbor, Michigan 48106

or WHOLE EARTH CATALOG

From the 'solid,' 'thingy' walk, Freedom shifted into a 'thinking' trot. Not only by the sweat of our brow but by the cleverness thereof, would we set tread. Much tread. The great American dream takes things & Think, Inc.—everything under control and a few beautiful people in the Think. As a trotting reward, the Corporation has built a beautifully decorated baroque estate, BUT THE FUTURE HAS SPLIT OUT! Once again, off and running down the cold cement. The only thing now left behind is the empty stables, the 'solid' straw, and the bad smell.

Now, 1969, no other when, the horse named Freedom is about to break into a full gallop, third gear. Up until now, in the walk, the trot (1st and 2nd gear), the harness, the bit and bridle have been in control. The control has been from without. Horse and rider, freedom and people, just puppets pulled on a string.

In the full gallop, both horse and rider are running free in the wind; glad to share the road. You and I, now, the horse, then drop the blinds from our eyes. Things, thoughts, stones, tree, dogs, that men in the last alley whatever his color—the whole world racing by—is caught up in the shape and mass of a single Big Man. The control is from within.

Freedom at full gallop is Celebration. The Big Man's general dance. Red barn full of all we're not hold him. Nor corral him by cleverness. The entire range of America from Atlantic to Pacific would still tramp his style. Oppenheimer, the physicist, says "the universe has become a wild windy place." Only the swift spiral of Celebration is big enough to swallow the world at a single gulp.

## Teg's 1994

We're generally down on Utopian thinking around here, holding to a more evolutionary fiasco-by-fiasco approach to perfection. Thus Walter D. Two, Island, Stranger in a Strange Land, and Rimmer's stuff have not been listed. They're well known enough anyway. One publication—relatively unknown—with a more structural brand of speculation is Theobald & Scott et al's Teg's 1994. The "book" is an on-going process that invites your participation.

(Suggested by Robert Theobald)

### Teg's 1994

Robert Theobald & J. M. Scott

1968, 115 pp.

14 copies \$5 each postpaid

5 or more \$3 each postpaid

from:

Personalized Secretarial Services

5045 North 12th Street

Phoenix, Arizona 85014

During her year of travel as an Orwell Fellow, Teg learns that her contemporary's concept of the "common good" is increasingly flawed by interaction failures between diverging communities. A full expression of each community's sub-culture, or myth, has been achieved only at the cost of increasing mutual incomprehension, and even a re-emergence of an aggressive community ethnocentrism.

Some of the longer-term residents have begun to question this community myth of sea-use, and are proposing a change to a myth of sea-co-existence. They wish to convert to a vegetarian sea-diet and prevent the eating of fish. The myth of sea-co-existence is presently essential to protein adequacy throughout the world's regions the other residents think this is unrealistic. There are also a few residents who want to change over completely to a myth of sea-separation. They propose surgical conversion of the human-being for water-breathing.



Under that wide sky's bowl of light the new roads and new concrete buildings—rows of developer houses, apartment buildings, commercial structures—seem to erupt from the landscape, which has been reduced to a flat, open, and barren vegetation. Elsewhere, the improvised housing of the poor, of their aluminum or pressed-board, looks as if it had been thrown together by a hurricane. It is a city of bulldozers, of engineers who wear boots and dungarees and carry shiny briefcases, of noisy bars and holes in the streets, and of new traffic interchanges. It is a city of building and of disorderly entrepreneurship; it is a city which lives in the future.

Another part of La Jaja's natural environment consists of the strip of unimproved land just beyond the Iron Mines fence. This land, covered with brush and cactus, is often used for toileting, especially by children; debris may be dumped there, and children collect certain wild fruits in the brush. Some medicinal plants (from an extensive folk pharmacopoeia of herbal remedies) are collected there by adults. Some men of the barrio shoot birds in this piece of monte. Boys hunt birds and sometimes raise the stunts, either thrown or projected with a sling shot, their accuracy is astonishing by American standards.

The general development planning and urban design functions of the CVC were being carried out far away from the people of La Jaja, on the thirteenth floor of the Shell Building, 360 miles away in Caracas. Some individuals in San Felipe—the priests, certain political and economic leaders—from time to time made visits to these offices, but to my knowledge no resident of La Jaja had ever been there, and certainly the overwhelming majority had no conception of that far-off world in which La Jaja appeared on maps as an area encircled by the planners' "Magic Mark" or zipatone symbols.

We're all waiting for the shift into third: Czechoslovakia, Vietnam, the black man, students, ghettos, Wall Street, Roman Curia, hippies and housewives. The little ones, the beautiful people, are coming out of the highways and the hedges. The whole world has become one big waiting room, a Greyhound Bus Terminal at 3 A.M. The stranded sitting in pitiful little piles of luggage in the fluorescent emptiness.

The clutch is in. Who has not somehow felt it grabbing at its entrails? The clutch can hardly be smooth and easy. The world is not a Volkswagen. The only way to get into third gear may be a violent grinding slam.

In all the doubt, despair, violence and madness, we have somehow to take our eyes from the clutch on the floor and fix them instead on the Celebration ahead. Even the worst kind of madness has a ring of reason to it. The best reason I know for this one of 1969 is:

The Big Man is in a hell of a hurry to get his wedding on time! And you know what? This wild, silly, mixed-up bitch of a world is his bride. How about that!

### Moving On

\$2/yr.

Box 1349

San Francisco, CA 94011



THE RED TENT

D.R. and Estelle had finished breakfast and were into cleaning out the bus when a woman from the red tent and the Porsche next door came over to borrow some sugar. She looked to be in her thirties somewhere, a very tanned athletic woman wearing a sweater vest and a pair of chit brown riding pants. She was European. Her accent was so thick Estelle at first didn't understand what she wanted. But finally she heard "shu-ger" and after they'd gone through the routine of scooping some brown sugar out of the coffee can Estelle kept it in, the woman began to come in a little more clearly.

"You arrive very early," she said.

"No, no," said Estelle. "Very early. We got here just at dawn."

"You must come far."

"Very far," said D.R. "Very, very far. And we've still got a long way to go."

"We have come far too. From Amsterdam to New York, from New York to here."

D.R. asked the woman where she got her red tent.

"How like it?"

"I've never seen a tent like that before."

"What you like to see inside? It is very lovely."

Estelle was knee-deep in the shit they'd unloaded from Urge and she wanted to get on with the work. But D.R. was fascinated by the red tent, and so he followed the woman past the Porsche over to her camping place. Another woman, about the same age as the first, but who turned out to speak no English at all, was just coming out the front flap as they walked up.

"These nice people loved me sugar," said the first woman, speaking European. "He admires our tent."

Her companion smiled and nodded and held the flap open for D.R. as he entered.

D.R.'s first hit was off the fantastic quality of the light inside. It was mid-morning by now. The sun was above the tree-line, shining directly into all the little clearings on the western side of the campground. It filled the red tent with the most completely restful light he'd ever seen before. A whole tension that had scowled his face tight all morning went away as his eyes gulped the quiet rose of the tent's interior. It wasn't large at all. There was only one place a person could half stand up, and two sleeping bags side by side would cover most of the floor. Yet somehow it struck D.R. as the most spacious, elegant room he'd ever been in. It was immaculate. In the corners of the tent near the entrance were two rolled sleeping bags. On top of each bag were small blue and white flight bags, both neatly zipped, the carrying straps unwound just so. Except for a strip of grass down the middle, the ground was covered by two straw mats. On each mat was a rubber air mattress, deflated and folded into a perfect square and stashed in the far corner of the tent. In the middle of the far end stood a short, three-legged table with a candle in it, and a small wildflower of some kind, in a glass of water. D.R. was amazed. He hadn't smoked any dope in over twelve hours now, and yet he felt completely stoned on the perfect arrangement of the small red world around him. He glanced over his shoulder to see if the two women were watching. When he saw them through the tent flap, he saw something over at the picnic table, he stretched himself out on one of the mats and stared up at the slanting red roof above him.



## Ecolgy and Resource Management

**Okay World Gamers:** Stop doing public relations and get into it. Kenneth Watt has, and it's technical business. Complexity, trade-offs, elaborate models that are still too simple, formulas that work once, unavoidable jargon. Did you think it was going to be a breeze?

—SB

## Ecolgy and Resource Management

Kenneth E. Watt  
1986; 450 pp.

\$14.50 postpaid

from:  
McGraw-Hill Book Company  
330 West 42nd Street  
New York, N.Y. 10036

or WHOLE EARTH CATALOG

## Resources and Man

*A fugue of finiteness, this just-published work portrays the true size of our North American yard. How much of the depletable there is, and how long they will last at present or projected rates. Some indications of the levels of exploitation where the "non-depletable" have to be given up on regeneration. For what might have been a dry book, the writing has considerable hair on.*

—SB

**Resources and Man**  
Clouff, Bates, Chapman, Hendricks,  
Hubbert, Keyfitz, Lovring, Ricker  
1989; 159 pp.

\$2.95 postpaid

from:  
W. H. Freeman and Co.  
680 Market Street  
San Francisco, CA 94104

or WHOLE EARTH CATALOG

## Man's Impact on the Global Environment

*Most recent, most methodic study so far of the price we're paying for this spree, and explicit recommendations for tapering off.*

—SB

## Man's Impact on the Global Environment

Study of Critical Environment Problems  
1970; 319 pp.

\$2.95 postpaid

from:  
M.I.T. Press  
Massachusetts Institute of Technology  
50 Ames St., Rm. 741  
Cambridge, Mass. 02142

or WHOLE EARTH CATALOG

## "Population Control" through Nuclear Pollution

*Low-dose radiation effects, the appalling pin in the nuclear energy bubble. Two technically savvy critics take on the self-promoting AEC.*

—SB

(suggested by Larry Kimmitt)

## "Population Control" through Nuclear Pollution

Arthur R. Tampin, John W. Gorman  
1970; 242 pp.

\$6.95 postpaid

from:  
Nelson-Hall Co.  
325 W. Jackson Blvd.  
Chicago, Illinois 60606

or WHOLE EARTH CATALOG

## Oil and World Power

*The brutal heart of the matter, by an Englishman not as irrational on the subject as Americans are.*

—SB

## Oil and World Power

Peter R. Lebel  
1970; 188 pp.

\$1.25 postpaid

from:  
Penguin Books, Inc.  
7110 Ambassador Rd.  
Baltimore, Maryland 21207

or WHOLE EARTH CATALOG



Large-scale biological systems are dynamic phenomena of great complexity, embracing lag effects, cumulative effects, thresholds, interactions between variables, large number of variables, and nonlinear causal relations. Because of this complexity, we must concede at the outset that even mathematical models based on oversimplified and hence unrealistic assumptions would be inadequate using traditional paper-and-pencil methods. Therefore the emphasis is shifted from ingenuity of mathematical manipulation to realism of description, with computer simulation being substituted for the character of the processes. This is not to belittle the complexity in the mathematics. Rather it leads to the complexity of a new type. The requirement now is the degree of insight into the character of the processes that will order that computer simulation studies can be in mimic nature.

•

## Resources and Man

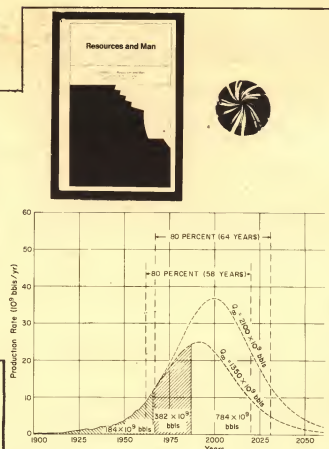


FIGURE 8.23 Complete cycles of world crude-oil production for two values of  $Q$ .

"In the West, our desire to conquer nature often means simply that we diminish the probability of small inconveniences at the cost of increasing the probability of very large disasters."

Kenneth E. Boulding

•

## Economics and the Environment

*A technical book, suggesting that accounting be applied to items formerly considered "free," such as air, water, waste. The transition from open to closed economics looks bitter.*

—SB

## Economics and the Environment

Kneese, Ayres, D'Arge  
1970; 120 pp.

\$2.50 postpaid

from:  
Johns Hopkins Press  
Baltimore, Md. 21218

or WHOLE EARTH CATALOG

The hunter is camped on a great plain with a small fire providing a flickering light and intermittent warmth. Tiny wisps of smoke ascend into a vast, clear night sky. Tomorrow the hunter will move, leaving behind ashes, food scraps, and his own excreta. After ten steps these are lost from sight and smell, probably forever. With them he leaves too his brief speculation about sky and earth, brought on by the loneliness of night, and he peers toward the horizon in search of prey.

The Administrator of the World Environment Control Authority sits at his desk. Along one wall of the huge room are real-time displays, processed by computer from satellite data, of developing atmospheric and ocean patterns, as well as the flow and quality conditions of the world's great river systems. In an instant, the Administrator can shift from real-time mode to simulation to test the larger effects of changes in emissions of material residuals and heat to water and atmosphere at control points generally corresponding to the locations of the world's great cities and the transport movements among them. In a few seconds the computer displays information in color code for every time period—hourly, daily, or yearly phases at the Administrator's option. It automatically does this for current steady state and simulated future conditions of emissions, water flow regulation, and atmospheric conditions. Observing a dangerous reddish glow in the eastern Mediterranean, the Administrator dials sub-control station Athens and orders a step-up of removal by the liquid residuals handling plants there. Over northern Europe, the brown smudge of the projected acid standards violation appears and sub-control point Essen is ordered to take the Ruhr area of sludge incineration for 24 hours but is advised that temporary storage followed by accelerated incineration—both with muffling—after 24 hours will be admissible. The CO<sub>2</sub> simulator now warns the Administrator that another upweller must be brought on line in the Murray Fracture Zone within two years if the internationally agreed balance of CO<sub>2</sub> and oxygen is to be maintained in the atmosphere.

Considerably more ambitious and information-hungry are models that attempt to describe population processes in some detail, while still assuming a constant extrinsic environment. Such models consider not only the numbers of animals present at each age, but also their growth rate, their harvesting mortality cost, and discussed model of this type was proposed by Beverton and Holt, (1956, 1957) for use in the understanding and management of commercially exploited stocks of oceanic fisheries. This model was developed as follows.

Consider the rate of change of biomass yield,  $Y_{wt}$ , with respect to time  $t$ . The average weight of fish of age  $t$  is given by  $w_t$ , and  $F$  denotes the instantaneous fishing effort. The harvest mortality coefficient, where  $N_t$  is the number of fished fish still alive in the typical year class, then

$$\frac{dY_{wt}}{dt} = F N_t w_t$$

gives the rate of change of biomass yield for the typical year class with respect to its age. The problem is to evaluate  $N_t$  and  $w_t$ .

That the fossil fuels be conserved for uses which may not be met by other sources. The fossil fuels (petroleum, natural gas, coal) are needed for petrochemicals, synthetic polymers, and elemental liquid fuels, for which suitable substitutes are as yet unknown. They might also play a part in synthetic or bacterial food production (although such a use is also limited). They should not be spent in the generation of electricity, for heating, and for industrial purposes where substitutes can qualify. The Department of the Interior should be authorized and directed to develop and institute a practicable and effective hydrocarbon conservation program.

## World Game Note

There's something funny going on round here.

Right in the middle of the March one dollar issue is Gene Youngblood's article on Fuller's World Game. It's exciting, inspiring even. Here are all these guys with all the best intentions about the world game so that by the year 2000 (if not sooner) everybody will have enough of everything. He really makes you feel like it's within reach, once we get off the merry-go-round of local politics. Though NASA has promised \$12 million, how much more will Fuller get when the feds discover that he really intends to put them out of business?

Anyway, once the world is all wired up, everybody will live at least as well as we do now. All the people, that is.

Right at the end of Youngblood's piece you slip into the Ecology section. The first thing to hit my eye was the quote from Lynn White, "The victory of Christianity over paganism was the greatest psychic revolution in the history of our culture." Christianity... not only established a dualism of man and nature, but he insisted that it is God's will that man exploit nature for his proper ends."

But what do you call wiring up the Earth? Far out. Maybe Fuller is the first of the really big Christians.

Are we to tell World Earth technocrats, insuring only our own survival? If you read closely you will note that Youngblood—like Fuller—talks about minerals and such, and makes no mention of organic things except what people can eat.

Are we to be Ecology Action pagans, trying to scramble back to a sense of union with the planet that created us?

The ecology people say we gotta change our whole culture, or we won't survive. The Fuller people say we've only got to make our culture really efficient not only to survive but to get a whole lot better.

You know, the problem goes all deeper than just will we survive, and how? No doubt we can with Fuller mold and shape and wire the earth toward the complete human habitation. We will change and even destroy a lot of things, but Fuller believes that the march of evolution on our side, and that people are really a lot more important than the brown pelican (to use an unfair example).

But it's not just a matter of "Christian America saying can't. I need the money." Money really isn't important, especially in America.

How much did we spend just to have a couple of guys walk on the moon, for "the spirit of exploration," for "national prestige"? How much do we pay for daily in Vietnam, for "the defense of democracy"? even as we search for "an honorable peace"? We struggle and fight for abstract ideas, and the money really doesn't matter.

Now Fuller obviously has the best technique for survival, given the human desire to avoid changing basic ideas. Fuller is a catalogue of 1700 years of Christian ideas. Up until now, Fuller believes that people really have no chance, because all they are talking about is survival, too.

But ecology really demands another psychic revolution. Like you say, holy war. We need to believe in something with the whole earth, and not just to survive, but because we really are. And that means, at least in the beginning, a new religion, a new faith.

Only through belief did you really change people's heads. And right now we believe in rationalism, in the technical method, in the validity of abstract numbers. Even the abstract numbers of the earthworm is full of the scientific things earthworms are and do, like 30 tons of this, 1800 species of that, 15 years of something else.

Somewhere I read an old Chinese parable about a farmer who refused to take the technological step of making a watershed to water his crops, even though he knew how. The rhythm and cycles of his life were important things. He would not, he said, subject his body to a machine merely for the gain of efficiency. In medieval China this was the highest wisdom.

The distance between that view of life and our own is almost unbridgeable, but it is that step ecology asks us to make. Can we make it? In thirty years?

So you have an answer? I don't. I'm afraid we had better light our candles to St. Buckminster.

Carl Jany  
Mall Valley, CA

I figure our best chance lies in ecological paganism, and the world game, and critical letters, and the rest of it. So long as stuff is getting dirtier, and there's lots of different stuff, and the stuff knows about each other, once it's in the world, evolution can sort it out.

—SB



## The Pentagon of Power

It's easy to O.D. on Fuller, Kahn, and other technological prophets. Mumford is a fine, careful antidote. He examines the unexamined premises that lead to excess.

—SB

## The Pentagon of Power

Lewis Mumford  
1970, 496 pp.  
\$12.95 postpaid  
from:  
Harcourt, Brace & Jovanovich, Inc.  
757 Third Ave.  
New York, N.Y. 10017  
or WHOLE EARTH CATALOG

Western man not merely blighted in some degree every culture that he touched, whether "primitive" or advanced, but he has robbed his own descendants of countless gifts of art and craftsmanship, as well as precious knowledge passed on by word of mouth that disappeared with the dying cultures. With this extirpation of earlier cultures went a vast loss of botanical and medical lore, representing many thousands of years of watchful observation and empirical experiment whose extraordinary discoveries—such as the American Indian's use of snake-root (referred to as a tranquilizer in mental illness)—modern medicine has now, all too belatedly, begun to appreciate.

Scientific truth achieved the status of an absolute, and the incessant pursuit and expansion of knowledge became the only recognized categorical imperative. Now, if the history of the human race teaches any plain lessons, this is one of them: *Man cannot be trusted with absolutes.*

## Technics and Civilization

I first read this book in 1957 then again in 1963 and then part of it in 1969.

Here is the first paragraph of the book.

During the last thousand years the material basis and the cultural forms of Western Civilization have been profoundly modified by the development of the machine. How did this come about? Where did it take place? What were the chief motives that encouraged this radical transformation of the environment and the routine of life: what were the ends in view, what were the means and methods? What unexpected values have arisen in the process? These are some of the questions that the present study seeks to answer.

Lewis Mumford is an unusual man. He is not an engineer or a scientist, he isn't an historian or sociologist, you can't identify him as a business man or a literary man or an academic. He seems beyond all those roles. This made him especially attractive to me when I was 19 because his style smelted of the place I wanted to go. He is profound, poetic knowledgeable. He takes care of the large and small things in his books.

Technics and Civilization is a good book to start with; if you like it, there are many others of his to turn to. Myth of the Machine, Arts and Technics, The City in History, Transformations of Man.

How I have used him: all through my twenties I used him as my guide.

[Suggested and reviewed by Steve Bae]

## The Ghost in the Machine

Koestler's latest book seems to be sharing the fate of Norman O. Brown's *Love's Body*: the book after the big influential one (*Act of Creation, Life Against Death*) is considered too far out, fragmented, excessive... and sells half-heartedly.

Nevertheless, Koestler here is doing useful dirty work: saving rat psychology, exploring broader implications of biological systems research, and foreseeing our imminent demise unless we organize our brain-use better. Which brings him to drugs. He proposes research to find a chemical which will voluntarily disengage old brain from new brain: the interior emotional kill-happy unprogrammable stuff from exterior rational flexible stuff. Our paranoia is accidentally designed in, he suggests, and may be designed out.

Get to it, outlaws. No nation is going to support this research.

—SB

## The Ghost in the Machine

Arthur Koestler  
1967, 384 pp.  
\$6.95 postpaid  
from:  
Macmillan Company  
Front and Brown Streets  
Riverside, Burlington County  
New Jersey 08075  
or WHOLE EARTH CATALOG

LEWIS MUMFORD

THE PENTAGON OF POWER

Unfortunately, if "meaning means association," as Gray Walters observes, then dissociation and non-intercourse must result in a decrease of shared meanings. Thus in time, specialized knowledge, "knowing more and more about less and less," finally turns into secret knowledge—accessible only to an inner priesthood, whose sense of power is in turn inflated by their privileged command of "trade" or official secrets.



2. The printing press was a powerful agent for producing uniformity in language and so, by degrees, in thought. Standardized mass-production, and capitalist enterprise came in with the printing press; and not without irony, the oldest known representation of the press, shown here, appeared in a Dance of Death printed at Lyons in 1495.

## Technics and Civilization

Lewis Mumford  
1934, 1962, 495 pp.  
\$3.75 postpaid  
from:  
Harcourt, Brace & Jovanovich, Inc.  
757 Third Avenue  
New York, N.Y. 10017  
or WHOLE EARTH CATALOG

AKHUR KOESTLER  
THE GHOST  
IN THE  
MACHINE

The origins and evolutionary development of modern man's psychological state

## DRAW BACK TO LEAP

It seems that this retelling of steps to escape the dead ends of the maze was repeated at each decisive evolutionary turning point. I have mentioned the evolution of the vertebrate from a larval form of some primitive achinid. Insects have in all likelihood emerged from a millipede-like ancestor—not, however, from adult millipedes, whose structure is too specialized, but from its larval forms. The conquest of the dry land was initiated by amphibians whose ancestry goes back to the most primitive type of lung-breathing fish; whereas the apparently more successful later lines of highly specialized fish-breathing fishes all came to a dead end. The same story was repeated amphibiously from every of the later forms that we know.

And lastly, we come to the most striking case of pedomorphosis, the evolution of our own species. It is now generally recognized that the human adult resembles more the embryo of an ape rather than an adult ape.

The salutary truth of the old proverb "Haste Makes Waste" was overridden by the new principle: "Haste and Waste Make Money."

Most of the important inventions and discoveries that served as the nucleus for further mechanical development, did not arise, as Spengler would have it, out of some mystical inner drive of the Faustian soul: they were wind-blown seeds from other cultures. After the tenth century in Western Europe the ground was, as I have shown, well plowed and harrowed and dragged, ready to receive these seeds; and while the plants themselves were growing, the cultivators of art and science were busy keeping the soil soft. Taking root in medieval culture, in a different climate and soil, these seeds of the machine sprouted and took on new forms: perhaps, precisely because they had not originated in Western Europe and had no natural enemies, when it made its way onto the continent, it grew as the American pumpkin. But at no point—and this is the important thing to remember—did the machine represent a complete break. So far from being unprepared for in human history, the modern machine age cannot be understood except in terms of a very long and diverse preparation. The notion that a handful of British inventors suddenly made the wheels hum in the eighteenth century is too crude even to dish up as a fairy tale to children.

A tent, he thought. A room of space. It starts here by my left arm, goes up there and ends there on the far side of the other mat. That is what this room is, and that is all it is, no more and no less. This is its total size and shape and full dimension: a room of space marked off and set aside by these walls of red canvas that weren't here yesterday probably and probably won't be here tomorrow, but they are here today and I am here too inside the particular space they enclose. This space has always been here. But it has not always been a room, at least not this room, because it has never been enclosed by this particular tent before. The space is here. The time is now. And they are intersecting in a way that no other tent has ever caused before. This very space where I am lying has been questioned ever before, closed up in other canvas rooms. And so the tent seems to be: would another tent around this same space re-create this room, or does this room disappear forever once this red tent has been removed and taken somewhere else? And what about when this tent is pitched in another place? If you pitch it in the Blue Ridge Mountains, take it down and put it up again in the Rockies, has the same room been in both places? Or is it another brand new room every time you pitch the tent again?

"Comfortable, eh?"  
The woman's voice startled D.R. and caused him to sit upright. But her smile was so friendly and there was such charm in her strange voice, D.R. relaxed again and invited the woman to come in. The idea struck her as very funny. Giggling, she called to her companion. Soon both women were in the tent with Divine Right, sitting cross-legged on the other mat, drinking tea and smiling back and forth at one another, and at D.R.

I mean, "D.R." was saying, "I mean, like, if you take this tent down, you know, take the poles down, fold the whole thing up, and move it fifteen yards... I mean, I'm just saying, if you move it, if you take it down and set it right again, where does the room... I mean, like, we're in a room, it's the room, these walls. And these walls are here. They're here, and they're here again. And so the question seems to be... the question seems to be, where does the room go when you take these walls down and fold them up and put them in your car?"

The lady who didn't speak English had begun to look a little troubled, perhaps even a little afraid. But when her friend interpreted her real meaning to both. Both women nodded and said, "Yes. Yes."

"Do you really know what I'm talking about?"  
"Of course," said the woman who had borrowed the sugar. "You're talking about space and time."  
"Fer out!" D.R. exclaimed. "Fer out!" Suddenly he had to get out of the red tent, and go and tell Estelle. Hastily he mumbled his thanks and his goodbye, and crawled to the opening. Outside, he was so excited he tripped over a tent stake and fell on his face.





## Man Adapting

The focus of this book is the human individual, what he has to deal with in this life, and what means he has to do the dealing with. Dubos is a superdoctor, so you get a damned well-informed medical perspective on questions of environment, population, health, nutrition, adaptation, etc., that subverts many a popular opinion.

—SB

The concept of perfect and positive health is a utopian creation of the human mind. It cannot become reality because man will never be so perfectly adapted to his environment that his life will be free of struggles, failures, and sufferings. Nevertheless, the utopia of positive health constitutes a creative force because, like other ideals, it sets goals and helps medical science to chart its course toward them. The hope that disease can be completely eradicated becomes a dangerous mirage only when its unsustainable character is forgotten. I can then be compared to a will-o-the-wisp luring its followers into the swamps of unreality. In particular, it encourages the illusion that man can teach his responses to stimuli and can make adjustments to new ways of life without having to pay for these adaptive changes. The less pleasant reality is that of never-changing world each period and each type of civilization will continue to have its burden of diseases created by the unavoidable failures in adaptation to the new environment.

The paradoxical truth is that the phenomenal increase in world population during the past 50 years has coincided with great epidemics, two world wars, several minor ones, and deep disruptions of social and economic life everywhere. Furthermore, as is well known, the most destitute and disease-ridden populations of the world are precisely the ones that are increasing the fastest.

## The Age of Discontinuity

How come Peter Drucker has so much good sense and perspective, and still remains so cheerful? Traditionally considerations such as his—economics, organizations, the future—turn a prophet's soul terrible and dark or at least partially wiggy. The only other intact flosser on this ocean I know of is Marshall McLuhan. You sense that both of them have a barbarian in their mind that resides somewhere else, some time ago. It would be worth pursuing this. How To Think Big and Stay Sane.)

The Age of Discontinuity takes notice of the remarkable continuity of the last 50 years in building on the technological breakthroughs of the Victorian era. Now, says Drucker, we are in for some hard changes, particularly around new technologies (of information, materials, oceans, megapoli, global economies, and redistribution of responsibility in large organizations.

—SB

## The Phenomenon of Man

Reading The Phenomenon of Man is a bit unnerving: Teilhard de Chardin manages to say most of the things many of us are trying to say. He said them in 1938. Was no-one listening?

The Phenomenon of Man deals with evolution—the ascent to consciousness. The plan of the book is

Pre-life: Life: Thought—three events sketching in the past and determining for the future (survival) a single and continuing trajectory, the curve of the phenomenon of man.

His aim is to try to say (and to help us to see)

to try to develop a homogeneous and coherent perspective of our general extended experience of man. A whole which unfolds.

Teilhard de Chardin  
The  
PHENOMENON  
of MAN



The Phenomenon of Man

from:  
Harper & Row  
49 East 33rd Street  
New York, N. Y. 10016

\$1.95 postpaid

or WHOLE EARTH CATALOG

"In most cases, man's responses are determined less by the direct effects of the stimulus on his body fabric than by the symbolic interpretation he attaches to the stimulus. Human beings may suffer and even die under circumstances which seem highly favorable to physiological performance, whereas paradoxically others will prosper even though conditions appear almost incompatible with the maintenance of life."

"The negative aspects of physical interrelationships are not the most common in nature, nor are they the most important in the long run. Under natural conditions, a state of equilibrium is commonly reached between various living forms when they have long been associated in a given area. This equilibrium is achieved through biological and social mechanisms that permit the survival and perpetuation of all species involved."

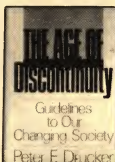
The truth is, that improvements in the general nutritional state begin when property and greater facilities for the transportation of food make it possible for many people to afford at least one square meal a day; likewise, the mortality of many infections began to recede in a dramatic fashion in Western Europe and North America long before the introduction of specific methods of therapy, indeed before the demonstration of the germ theory of disease.

The Age of Discontinuity  
Peter F. Drucker  
1969, 401 pp.

\$7.95 postpaid

from:  
Harper & Row  
49 East 33rd Street  
New York, N. Y. 10016

or WHOLE EARTH CATALOG



Since the computer first appeared in the late 1940's the information industry has been a certainty. But we do not have it yet. We still do not have the effective means to build an "information system." This is where the work is going on, however. The tools to create information systems may already exist: the communications satellite and other means of transmitting information, microfilm and the TV tube to display and store it, rapid printers to record it to permanent record, and so on. There is no technical reason why someone like Sears Roebuck should not come out tomorrow with an appliance selling for less than a TV set, capable of being plugged in wherever there is electricity, and giving immediate access to all the information needed for schoolwork from first grade through college.

Yet though IBM is now shipping computers at a rate of a thousand a month, we do not have the equivalent of Edison's light bulb. What we are lacking is not a piece of hardware like the light bulb. What we still have to create is the conceptual understanding of information. As long as we have to translate laboriously every set of data into a separate "program," we do not understand information. We have to be capable of classifying information according to its characteristics. We have to have a "notation," comparable to that of Mr. Ambrose invented 1,600 years ago to record music, that can express words and thoughts in simple computer language to electronic pulses filterable in the clumsy computer language of today. Then each person could, with very little training, store his own data within a general system that, in what the computer engineers call "routines," then we shall have true "information systems."

Underlying the beautiful presentation of man's ascent towards consciousness is a hard core of science:

Man, in nature, is a genuine fact, falling... within the scope of the requirements and methods of science.

[Reviewed by Dave Evans,  
Suggested by Julia Brand.]



A PLACE FOR EVERYTHING  
AND EVERYTHING IN ITS PLACE

Estelle everything's by god I really believe it is. You can tell it, you can feel it, the signs are all around. This is here and we are now and the intersection of time and space is just special as hell, and I'm going to find out some things we need to know. I believe there's going to be better relations between east and west. I believe if we get organized, a place for everything and everything in its place, books in a book box, clothes in a clothes box honey you've done a wonderful, you have now, and I love you for it and take heart and determine to be better than I've been in a long time. Those women understood every word I said. When we get to St. Louis. Are these crackers any good? What's the tape recorder? What's it put the cassette? When we get to St. Louis I'm going to get some car polish and wax old Ugas all over. Is this to throw away? Ain't this box any good? We need all the boxes in St. Louis I'm going to get tan cardboard boxes of identical size and label them with what they're supposed to hold. Books in one, look at this shit on my Whole Earth Catalog. Fuck, I was going to order some stuff out of there. Books in one box, tape shit in another, every goddamn thing we got's going to have its proper place. You've done a wonderful thing here honey, you really have. You ought to see their tank. From now on. When we get to St. Louis. Here, let me lift that for you. Wait! Don't throw that glass away. Here, I'll wash it out after while. I want to put a wildflower in it. I got into this rap about space, you know? I was afraid. But they knew exactly and I believe the world's getting to be a better place. I realize that from some ways in my mind. I think love and gentleness and neighborliness and human harmony are going to prevail. I think the stars are moving into very particular cosmic arrangements. And we've got to do our part. I believe it all depends on everybody doing his part. Look at this bus, goddamn I bet old Ugas is proud.

homination...noogenesis...cosmogensis...when Teilhard de Chardin uses a simple word like homogeneous something magical happens to it.

The Omega point is where man is God and God is man, where all layers of the noosphere become involved, fusing and consuming the All and the Person integrally in itself.

The mind is essentially the power of synthesis and organization.

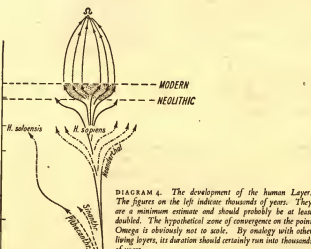


DIAGRAM. The development of the human layer. The figure on the left indicates thousands of years. They are a minimum estimate and should probably be at least doubled. The hypothetical zone of emergence on the left. Omega is obviously not a scale. By analogy with early living layers, its duration should certainly run into thousands of years.

— Homo sapiens  
— H. erectus  
— H. habilis  
— Australopithecus  
— Simioides

Human Evolution  
Whole Systems

31



## The Subversive Science

"So God created man in his own image, in the image of God he created him; male and female he created them. And God blessed them, and God said to them, Be fruitful and multiply, and fill the earth and subdue it, and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth." Genesis 1:27-28.

And we have been fruitful, and we have filled the earth and subdued it, and we have dominion over every living thing. And what is subversive about ecology is that we know now we must turn aside from that ancient narrow edict, and live with, and not upon, the earth.

The Subversive Science is thirty-seven essays on the shape of life. By its very breadth it creates a depth of truth no single point of view could ever make. There is a new world view within this book, a new sense of ourselves and our position on and within this earth. It is rigorous and scientific and yet in its vibrant complexity almost mystic.

[Reviewed by Cary James]

Igloos, tepees, prairie sod-huts, hogans, pueblos—have ecology in their roof-lines.

These shelters for families, like such individual protectors as sunbonnets, sombreros, serapes, are oriented to a landscape, to weather, and to local materials.

## Ecology

There are two major components to ecological study: quantitative and cybernetic. The cybernetic—control relationships—is most interesting, but the only reliable research avenue to that understanding is through grueling quantitative investigation. This book is a concise and reliable introduction to the science.

Ecology  
Eugene P. Odum  
1983; 153 pp.

\$4.25 postpaid  
from Holt, Rinehart & Winston, Inc.  
383 Madison Ave.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

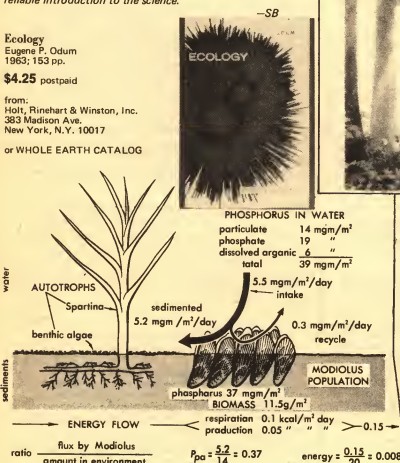
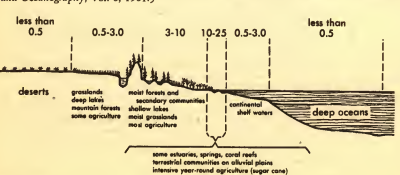


Fig. 4-4. The role of a shellfish (mussel) population in cycling and retaining phosphorus in an estuarine ecosystem. The population has a major effect on the distribution of phosphorus even though the species is but a small component in the community in terms of biomass and energy flow. (Based on data from E. J. Kunzler, *Limnology and Oceanography*, Vol. 6, 1961.)



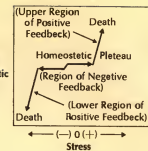
## The Subversive Science—Essays Toward an Ecology of Man

Paul Shepard  
Daniel McKimley, eds.  
1969; 453 pp.

\$6.50 postpaid

from:  
Houghton Mifflin Co.  
Weyland Road  
Burlington, Mass. 01803

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We who were close to the Indians watched the disappearance of boys from public view. Even their father saw them no more. After sometimes a year, sometimes eighteen months, the boys returned from the underground kivas, from the pathless areas of the Sangre de Cristo range, from the hidden crevices where perhaps burns the mystical everlasting fire. Radiant of face, full-rounded and powerful of body, modest, detached, they were men now, keepers of the secrets, houses of the Spirit, reincarnations of the countless generations of their race, with "reconditional reflexes," with emotions organized toward their community, with a connection formed until death between their individual beings and that mythopoeic universe that cosmic illusion—that real world—as the case may be, which both makes man through its dreams and is made by man's dreams.

The desire to maintain absolute constancy in any system must be recognized as deeply pathological. Engineering theory indicates that excessive restraints can produce instability—in psychiatry also, the desire for complete certainty is recognized as a most destructive compulsion. And in the history of nations, attempts to control rigidly all economic variables have uniformly led to chaos. The psychologically healthy human recognizes that fluctuations are unavoidable, that waste is normal, and that one should institute only such explicit controls as are required to keep each system on its homeostatic plateau. We must devise and use such controls as are needed to keep the social system on the homeostatic plateau. On this plateau—but not beyond it—freedom produces stability.



"This is the day that the sun that had been for us and the moon that came from the gods that had been for the people of the world."

Perhaps the most serious obstacle impeding the evolution of a land ethic is the fact that our educational and economic system is headed away from, rather than toward, an intense consciousness of land. Your true modern is separated from the land by many middlemen, and by innumerable physical gadgets. He has no vital relation to it; to him it is the space between cities on which crops grow.

When we think in terms of systems, we see that a fundamental misconception is embedded in the popular term "side effects" (as has been pointed out to me by James W. Wiggins). This phrase means roughly "effects which I hadn't foreseen, or don't want to think about." As concerns the basic mechanism, side effects no more deserve the adjective "side" than does the "principal" effect. It is hard to think in terms of systems, and we eagerly warp our language to protect ourselves from the necessity of doing so.

Whether you will or not  
You are a King, Tristram, for you are one  
Of the time-tested few that leave the world.  
When they are gone, not the same place it was.  
Mark what you leave.

## Concepts of Ecology

There is a crusade called Ecology. And also a science called Ecology. And they're not as distinct as they think they are.

This book is about the science, unhindered by rhetoric. Its subject is energy flow, cycles, populations, ecological communities, and man's place in the system. The emphasis is on theory and observation rather than math. Areas that are still poorly understood get due attention. I wish this book had been around when I studied ecology.

Although the original coming of the term is an uncertainty, there is consensus that the German biologist Ernst Haeckel first gave substance to it in the following statement:

By ecology we mean the body of knowledge concerning the economy of nature—the investigation of the total relations of the animal both to its inorganic and to its organic environment; including above all, its friendly and inimical relation with those animals and plants with which it comes directly or indirectly into contact—in a word, ecology is the study of all the complex interrelations referred to by Darwin as the conditions of the struggle for existence.



"This is the day that the sun that had been for us and the moon that came from the gods that had been for the people of the world."

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Reprints, from R. D. Hughes and D. Dunning. 1949. *Pine Forests of California*. U. S. Department of Agriculture Yearbook.

Fig. 5-2. Profile of central Sierra Nevada showing altitudinal distribution of principal forest types.

## Environment and Man

This is a pretty complete introductory text, well-illustrated, of all the ecological issues. There's quite a few of them, and to respond right we do need to know about all of them, or a solution to one problem may accelerate six others.

Environment and Man  
Richard H. Wagner  
1971; 491 pp.

\$7.50 postpaid

from:  
W. W. Norton & Company, Inc.  
55 5th Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



—SB

When species diversity is reduced in natural ecosystems, either willfully or inadvertently, the same kinds of problems seen in monoculture begin to arise. But a natural ecosystem cannot be treated like a cornfield and routinely sprayed to control some beetle or caterpillar. For a biocide that might be tolerated in a cornfield could so scramble the food web in a woodlot that the original problem would be lost in the ensuing chaos. Moreover, while we can afford the energy input to maintain a field of corn because of the value of its yield, we cannot possibly afford the economic burden of maintaining natural ecosystems that have maintained themselves until disturbed by man. Consequently, until we know exactly the role of every organism in an ecosystem, how it controls or is controlled by others, we cannot abandon any species as superfluous, nor even that pitiful flock of seventy whooping cranes. If we do we run the risk of having to cope with future population explosions of fungi, insects, rodents, or whatever, that might well dwarf any problems seen to date.



Figure 4.7 The areas in black are over five miles from the nearest road, railroad, or navigable waterway. This is America's remaining wilderness. (From C. Tunnard and B. Pashkarev, *Man-Made America*, Yale University Press, 1963.)

## Science and Survival

Scientific and technological critics are significantly rare and much more common. Barry Commoner is a good one—prestigious scientist, active administrator, capable writer, committed critic.

Reading his anthology of technological blunders, I am led to wonder if the success of death-free-driven science merely changes the size of the package that death comes in. There's less piecemeal local, "natural" dying, and more of massive "caused" dying. I think I prefer the old way. Is anybody working on establishing friendlier relations with Death? Maybe he's a good guy who's had bad press.

—SB

[Suggested by Peter Montague]

The trouble began with the failure of a relay which controlled the flow of electricity from the Sir Adam Beck No. 2 power plant in Queenston, Ontario, into one of its feeder lines. The remaining lines, unable to carry the extra load, shut down their own safety switches. With these normal exits blocked the plant's full power flowed back along the lines that tied the Queenston generators into the U.S.-Canadian grid. This sudden surge of power, traveling across New England, quickly tripped safety switches in a series of local power plants, shutting them down. As a result the New England region, which until then had been feeding excess electricity into the Consolidated Edison system in New York, drained power away from that city, under this strain the New York generators were quickly overloaded and their safety switches shut off. The blackout was then complete. The system had been betrayed by the very links that were intended to save local power plants from failure.

The new hazards are neither local nor brief. Air pollution covers vast areas. Fallout is worldwide. Synthetic chemicals may remain in the soil for years. Radioactive pollutants now on the earth's surface will be found there for generations, and, in the case of carbon-14, for thousands of years. Excess carbon dioxide from fuel combustion eventually might cause floods that could cover much of the earth's present land surface for centuries. At the same time the permissible margin for error has become very much reduced. In the development of steam engines a certain number of boiler explosions were tolerated as the art was improved. If a single comparable disaster were to occur in a nuclear power plant or in a reactor-driven ship near a large city, thousands of people might die and a whole region be rendered uninhabitable—a price that the public might be unwilling to pay for nuclear power. The risk is one that private insurance companies have refused to underwrite. Modern science and technology are simply too powerful to permit a trial-and-error approach.

Sometimes, in moments of impending crisis, we are aware only that the main outcome of science is that the planet has become a kind of colossal lightning triggered time bomb. Then all we can do is to issue an anguished cry of warning. In calmer times we try to grapple with the seemingly endless problems of unraveling the tangle of nuclear physics, seismology, electronics, radiation biology, ecology, sociology, normal and pathological psychology, which under the crosscurrents of local, national, and international politics, has become the fruitful arena that goes under the disarming euphemism "public affairs."

## Science & Survival

Barry Commoner  
1966; 150 pp.

\$1.25 postpaid

from:

Ballantine Books, Inc.  
101 Fifth Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



## Not So Rich As You Think

Once upon a time, men lived in trees high above the forest floor. It was a gay, carefree life—your food grew right in your house and when you had eaten your fill you tossed the garbage down through the leaves. The same with your shit, and even your body when you died. The forest scavengers and processes of decay speedily disposed of all refuse.

Man came down from the trees long, long ago and created for himself a less carefree way of life. But he remains the filthiest animal around, treating his environment as if it were still magically gobbling up everything he discards. This book documents the folly with the gross disheartening facts. From human excrement to nuclear fallout, with smog, DDT and the junkyard on the way.

—HH

[Suggested by H.R. Hershey, Jr.]



Not So Rich as You Think  
George F. Stewart  
1968; 170 pp.

\$9.95 postpaid

from:  
The New American Library  
1301 Avenue of the Americas  
New York, New York 10019

or WHOLE EARTH CATALOG

Toward an Ecological Solution, Murray Bookchin

The Politics of Population, Aldous Huxley

All About Ecology, William Murdoch and Joseph Connell

What We Must Do, John Platt

Humanistic Biology, Rene Dubos

Blind Faith in the Omnipotence of Technology, Richard Merrill

Outwitting the "Developed" Countries, Ivan Illich

Life is an Endless Give-And-Take With Earth and All Her

Creatures, Rene Dubos

Man's Eco-System, Lamont C. Cole

from:

Ecology Center Confederation

1300 Howard Street

San Francisco, Calif. 94103

## Ecology Center Reprint Series

A number of recent ecological statements have acquired 'classic' status. You can search through three libraries for them, or you can get them straight and simple from Ecology Center.

—SB

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The Four Changes, Anonymous

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The Tragedy of the Commons Revisited, Beryl L. Crowe

The Historical Roots of Our Ecologic Crisis, Lynn White Jr.



## RETURN OF THE LONE OUTDOORSMAN

The birds in the treetops hushed their singing as the Lone Outdoorsman came into Divine Right's camp. But D.R. was too deep into his monologue to catch the warning. He was too deep into it when he realized that Estelle had left the camp and gone for a walk. Before he could prepare himself in any way, there the Outdoorsman was, standing above him with his hands on his hips, staring at D.R. like a teacher or a cop. As he became aware of the Lone Outdoorsman's presence, D.R. went silent as the birds. The music that had filled his head changed from harps to kettle drums, and he wondered where Estelle had gone, and why.

"Afternoon," said the Outdoorsman.

"Good afternoon," said Divine Right.

"How're you?" asked the Lone Outdoorsman.

"Okay, I guess," said D.R.

"Yeah. Well, I noticed you over there in the tent with those foreign legends, and I just wondered if anything might be wrong."

"No," said D.R. "Nothing wrong, as far as I know."

"That's a moon with a crab on it," said D.R.

"The tent with 'em. You never know. Cleaning out your bus, looks like."

D.R. nodded. He had been kneeling among the stuff from the bus when the Outdoorsman first came over. Now he was on his feet, and following the Outdoorsman as he walked around the bus, looking at the paint job.

"You paint all this stuff on your bus?" asked the Outdoorsman.

"Some of it," said D.R.

"How come you to do it?" said the Outdoorsman. "Messing up a good paint job. Of course, the pig weighs it down some, and my boat. But it's still outrun a bus like yours any day of the week, you better believe that."

D.R. asked the Outdoorsman why he was telling him that.

The Outdoorsman said you never know. Then he told D.R. to let him know if anything came up.

"What do you mean?"

"Well. You know. Trouble."

D.R. nodded. His head was pounding. He watched the Outdoorsman lift his pipe, then carefully crumpled the match against his knive handle.

"You remember what I told you, now," he said, and he turned and jingled off through the trees to his own camp.



## The Population Bomb

There's a shit storm coming. Not a nice clean earthquake or satisfying revolution but pain in new dimensions: world pain, sub-continents that starve and sub-continents that eat unable to avoid each other. The consequences will dominate our lives. In the heart of the problem are the solutions, and the sooner we're clear about what's happening the sooner the solutions can work their way out. This book is the best first hard look that's around. The author is a well-regarded young population biologist and ecologist who freaked out of his lab and into the media with the bad news. Besides freaking well he reports well.

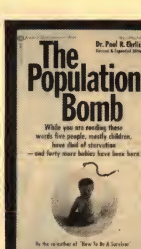
—SB

**The Population Bomb**  
Dr. Paul R. Ehrlich  
1968, 223 pp.

\$3.95 postpaid from  
Ballantine Books, Inc.  
c/o Simon & Schuster, Inc.  
630 Fifth Avenue  
New York, N. Y. 10020  
or WHOLE EARTH CATALOG

It is, of course, socially very acceptable to reduce the death rate. Billions of years of evolution have given us all a powerful will to live. Intervening in the birth rate goes against our evolutionary values. During all those centuries of evolution, we passed the individuals who had the most children passed on their genetic endowment in greater quantities than those who reproduced less. Their genes dominate our heredity today.

The reproductive function of sex must be shown as just one of its functions, and one that must be carefully regulated in relation to the needs of the individual and society. Much emphasis must be placed on sex as an interpersonal relationship, as an important and extremely pleasurable aspect of being human. Man's major and most enduring recreation, as a fountainhead of his humor, as a phenomenon that effects every aspect of his being



The battle to feed all of humanity is over. In the 1970's the world will undergo famines—hundreds of millions of people are going to starve to death in spite of any crash famine relief efforts. At this late date nothing can prevent a substantial increase in the world death rate, although many lives will be saved through dramatic programs to 'stretch' the carrying capacity of the earth by increasing food production. But these programs will only provide a stay of execution unless they are accompanied by determined and successful efforts at population control. Population control is the conscious regulation of the numbers of human beings to meet the needs, not just of individual families, but of society as a whole.

Nothing could be more misleading to our children than our present affluent society. They will inherit a totally different world, a world in which the standards, politics, and economics of the 1960's are dead. As the most powerful nation in the world today, and its largest consumer, the United States cannot stand isolated. We are today involved in the events leading to famine; tomorrow we may be destroyed by its consequences.

Remember also that in virtually all undeveloped countries, people have gotten the word about the better life it is possible to have. They have seen colored pictures in magazines of the miracles of Western technology. They have seen automobiles and airplanes in the news. They see American and European movies. Many have seen refrigerators, televisions and even TV sets. Almost all have heard transistor radios. They know that a better life is possible. They have what we like to call "rising expectations." If twice as many people are to be happy, the miracle of doubling what they now have will not be enough. It will only maintain today's standard of living. There will have to be a tripling or better. Needless to say, they are not going to be happy.

A ship has hit the rocks and is sinking. The passengers scream for help. Some jump overboard and are devoured by the circling sharks. A group of children, still on board, see the ship sink. One of the children, Benji, says, "I don't see any sharks. Oh, no! not the others." That might hurt the captain's feelings. Benji says, "I don't see any sharks. I'm outside our field of competence." You can guess what they do. They appoint a committee to solve the problem. They get together on the marine engineering and navigation. They announce to the passengers that in two or three years the committee will produce a wonderful report which will be acceptable to the passengers, the captain, and the steamship line. Not so passive are the politicians. Some jump up to say that the passengers don't understand the political realities of the situation. Other more progressive politicians get up and start belling, stopping every few seconds to accept praise for their stellar efforts.

Careless overuse of DDT has promoted to 'pest' category many species of insects, little insecticide relatives of spiders. The insects which ate the mites were killed by the DDT, and the mites were left to DDT. There you have it—instant pests, and in fighting these Frankenstein's of their own creation. What's more, some of the more potent pesticides the world produces are cancer-producing substances.

The old idea that industry could create the mess and then the taxpayers must clean it up has to go. The perage produced by an industry is the responsibility of that industry.

## Population, Resources, Environment

In *Population Bomb* Ehrlich spared us the customary statistics and graphs, and he was accused of being no scientist. So here are the statistics and graphs and much besides—a 400-page textbook on the population-environment crisis. Don't bother taking a course. The lab is the world.

—SB

**Population, Resources, Environment**  
Paul R. Ehrlich, Anne H. Ehrlich  
1970, 400 pp.

\$8.95 postpaid from  
W. H. Freeman and Company  
680 Market Street  
San Francisco, CA 94104  
or WHOLE EARTH CATALOG



The global polluting and exploiting activities of the DC's are even more serious than their internal problems. Spacecraft Earth is now filled to capacity or beyond and is running out of food. It is yet the people traveling first class are, without thinking, demolishing the ship's already overstrained life-support systems. The food-producing mechanism is being sabotaged. The devices that maintain the atmosphere are being turned off. The temperature-control system is being altered at random. Thermocoupler bombs, poison gases, and super-germes have been manufactured and are being piled by people in the first-class compartments for possible future use against other first-class passengers in their competitive struggles for dwindling resources—or perhaps even against the expectant but weaker masses of humanity in steerage. But, unaware that there is no one at the controls of their ship, many of the passengers ignore the chaos or view it with cheerful optimism, convinced that everything will turn out all right.

1877-1878 North China. "Appalling famine raging throughout four provinces [of] North China. Nine million people reported destitute, children daily sold in markets for [rising meat to procure] food. . . . Total population of districts affected, 70 millions. . . . The people's faces are black with hunger; they boys are openly offered for sale to women and girls and are dying by thousands upon thousands. Women and girls and I left the country, a respectable married woman could be easily bought for six dollars, and a little girl for two. In cases, however, where it was found impossible to dispose of their children, parents have been known to kill them sooner than witness their prolonged suffering, in many instances throwing themselves afterwards down wells, or committing suicide by arsenic.

All flesh is grass. This simple phrase summarizes a basic principle of biology that is essential to an understanding of the world food problem. The basic source of food for all animal population is green plants—"grass." Human beings and all other animals with which we share this planet obtain the energy and nutrients for growth, development, and sustenance by eating plants directly, by eating other animals that have eaten plants, or by eating animals that have eaten animals that have eaten plants, and so forth.

Because, as indicated in the acknowledgments, the various drafts of our manuscript were thoroughly reviewed by a large number of critics who are competent in the various areas covered, we believe that the general outline of the book is sound throughout. We do not believe that such minor errors as may be revealed by the figures, estimates, or interpretations will change the thrust of our major conclusions. We are confident that the book will determine exactly what has happened, or is now happening, in the field of environmental science and human behavior. It is the significance of certain trends may be. Data are often unreliable or unavailable, and the complexity of the environmental and political systems and human behavior is still fragmentary. But in dealing with the population-resource-environment crisis, it is important to recognize that people are going to have to make decisions in the face of such uncertainty. Possible benefits will have to be weighed against possible risks, and a great deal of thought given to possible future events which may seem unlikely but which will be catastrophic if they do occur. It would be a major step forward for mankind if all people could know the general state of the world and could be informed as to just what chances are being taken with their lives and the lives of future generations.

From the almost limitless number of subjects which might have been included in this book, choices of those that were to be treated in detail had to be made. We have tried to emphasize those which seemed to us to be of the most general importance, and we make no apology either for our selection of subjects or for the personal style and approach we have used throughout. We have not attempted to give equal weight to both sides of all controversial issues; where we think one side is correct we have so indicated. We also make no claim to having tried to detail all exceptions to general rules. We hope that this book will provide concerned readers with enough background to enable them to make informed political decisions about environmental issues and to combat what C. P. Snow has referred to as the "excessive unsophistication" which, in his words, "crops up whenever anyone makes a proposal which opens up new prospects, and which is a necessary by-product of a skill which all conservative functionaries are masters of, as they ingeniously protect the status quo: it is called the 'technique of the intricate defense'."

## Population, Evolution, and Birth Control

Once you've woken up to the population squeeze and the blindness of most of your fellow men, it's worth looking around. Garrett Hardin has assembled a strong selection of eyes to look around with. Here are the ingredients for understanding. Now, how do we get the mule's attention?

—SB

The closed earth of the future requires economic principles that might be somewhat different from those of the open earth of the past. For the sake of picturesqueness, I am tempted to call the open economy the "cowboy economy," the cowboy being symbolic of the illimitable plains and the associated reckless, exploitative, romantic, and violent behavior, which is characteristic of open societies. The closed economy of the future might similarly be called the "spaceman" economy, which, therefore, man must find his place in a cyclical ecological system which is capable of continuous reproduction of material form even though it cannot accept having inputs of energy.

Kenneth E. Boulding

**Population, Evolution and Birth Control**  
Garrett Hardin, ed.  
1964, 1969, 388 pp.

\$2.95 postpaid

from:  
W. H. Freeman & Co.  
680 Market Street  
San Francisco, CA 94104

or WHOLE EARTH CATALOG

If the food supply is falling short, or a new disease threatens us, inventions to relieve it must be made before famine and pestilence have done their worst. Now, we have to turn to famine and pestilence then we like to think. Let there be an interruption of the water supply of New York for six hours, and it will show in the death rate. Let the gas lines bring supplies into the city be interrupted for forty-eight hours, and one people will die hungrier. Every time we have a great deal to deal with the administration of the public facilities of a great city has been struck with terror at the risks which people are willing to undergo and must undergo and are so complacently ignorant of these risks on the part of his charges.

Norbert Wiener

The rest of the night I lay there sleepless, trapped between the two human cry in the night and the cold fact that forced me to know I could not save him or the thousands of others whose cries I could not hear. The next morning they came and told us that the bigger was dead.

Gerard Winfield

We are talking about how to be able to change the games that Peoples play.

The strategy of game change is: you don't change a game by winning it or losing it or refereeing it or observing it. You change it by leaving it and going somewhere else and starting a new game from scratch. If it has appeal it will gather its own energy. (Fighting a system, however, merely strengthens the system, which accounts for a lot of bitter revolutionary, including victorious ones.)

Whatever plays the game, the game is played on the field of the physical. Mind points don't count unless something happens physically. Pain penalties are of no consequence unless something adapts physically. Move the molecules, or admit you're a spectator.

As mind grows mightier, and physicality states what it is, the world may manifest a subtler and subtler play of elements, wielded with enormous finesse by intellect—largely invisible, but ever felt to this world by the mundane leash. I like the rule. (Margaret Fuller said, "I accept the universe." Thomas Carlyle said, "She'd better.")

There are lots of ways to organize social behavior. The advantage of working with games is that they are regenerative, if they work. The fun of playing sustains the game from within, from the pleasure of the players. Instigators need not be leaders; the game generates its own leadership and succession.

## Liferaft Earth

The event we did recently called Liferaft Earth was designed as a game. Its intent was to make very personal the matter of population control. The stadium was the news media, or a certain amount of theater (i.e. plot) was designed in.

The few rules, announced far in advance of the event, were: a lot of people sat publicly together for a week without eating. Anybody may leave anytime but may not return; their departure is considered a death.

The bait for the media, besides the noble cause, was suspense. Who would come to the event? How many would last the week? Who would they be? What kind of stuff would go on with hungry people penned up together?

An additional unexpected question was, Will the sponsors find a place to hold the event? We went into our press conference to announce Liferaft Earth still without a site for it. (Nobody wanted the unknown in their yard, not the University of California, Stanford, Berkeley, San Francisco, Tilden Park, San Mateo County. Everybody loved the idea, somewhere else.) So the press conference consisted partly of us asking for a place to hold our noble event. And it went pretty well—Jerr Mander had not given much information in the press releases, so press had to come to get the news. We had some attractive names helping with the announcement: Stephanie Mills, Dr. Eugene Schoenfeld, Don Aiken of Friends of the Earth, Dr. Sheldon Margen with nutritionist credentials at Cal, and Wavy Gravy (in his last days as Hugh Romney) dressed as a hamburger. Further visual interest—useful for TV and wirephotos—was provided by Earth posters, the door for the event with its sign "Are You Ready To Die", and a splendor model of the inflated 10,000 sq. ft. polyethylene pillow that we planned to hold the event in. Even though the reporters distrusted us for not having a site, the item was carried on local TV and newspapers, and the wire services. Thank the popularity of environmental issues for that.

LIFERAFT EARTH PHOTOS BY BONNIE-JEAN ROMNEY



Under the Press Conference gun.

The following five pages chronicle a week-long event sponsored and organized by the CATALOG in October 1969.

Richard Brautigan saw the end of it. The beginning of it was three days I spent alone on a train with excellent hash and Paul Ehrlich's Population Bomb. Ehrlich had been a teacher of mine, back in his butterfly and my tarantula days, so I knew to believe him.

# LIFERAFT EARTH

Site-finding was getting truly desperate when a phone call from Hayward in the East Bay came through. A guy named Bill Goetz, head of a poverty program office in Hayward, said he had seen us on Channel 2 and did we want to hold the event in his parking lot. I went and looked, and it was all wrong, too small, all at a weird angle on a hillside, out of anybody's mainstream, into a different population than us—old folks and Spanish and social workers. . . . It was perfect. So was Goetz and his staff. So, it turned out, was Hayward.

Hayward's city manager was an old acquaintance of the head of Portola Institute. That meant that from the top there was trust. We got nothing but friendly cooperation from the city fire department, police department, health inspectors, and press. After what we'd been through, Bill Goetz and Hayward had our vote as All-American City of the Year.

Who were the cast by now? Most active was Wavy Gravy, who had signified for the Hog Farm's participation way back during the summer. Now he was inviting people left and right, buying toys like jacks and plastic fruit, hustling around. Frantic work was going on by the Southeast Inflation-environment group (Initially Charlie Tilford, by now mostly Andy Schapiro and Joe Hall)—they were building a net to hold down the vast pillow and getting kicked off test sites. Slack polyethylene burns like napalm; inflated poly doesn't: try telling that to a Fire Marshal. Dick Raymond of Portola Institute was placing our insurance company and all the others who needed hourly placation. Stephanie Mills was on her Planned Parenthood phone inviting and reassuring. Jim Burleigh of People's Architecture in Berkeley was still helping to find a way to do it in Berkeley. Dan Rosenberg of Sierra Club, out of the blue sky had volunteered to help find a site (Dan is the model of something every business should have, a company good guy, who's paid to go out and find good that needs doing, and do it). Back East Charlie Tilford was camped in the Union Carbide offices trying to get a pillow of non-inflammable vinyl. Bill Goetz was busily soothing the concerned environs of his parking lot.

Since confirmation of the site came only 2 days before the event, we distributed map press-releases to the media, and made them available to participants through offices in Berkeley, San Francisco and Menlo Park. The last words of instruction were:

To make the event as easy as possible on the community we're asking that participants who plan to starve in not park in the immediate vicinity of the site. Have someone drop you off, or park a long distance away. If you are a temporary visitor, please do what you can to reduce traffic near the event. There are many people living and working in the neighborhood of the site who did not ask for a public show on their street. They deserve every courtesy. The Hunger Show begins on Saturday, Oct. 11, with the door closing on the pillow at 6 p.m. Whoever's inside at that time is in the show. No one else comes in. Anyone can leave anytime (no return). Participants should have their own sleeping gear and clothing to accommodate warm days and chilly nights. No food in the pillow. There is water. Persons with kidney troubles or other ailments that might be made worse by malnutrition should skip this token famine and wait for the real thing in 1977. There will be an MD on hand for emergencies and through the night. No children fasting please; not yet. Participants will be asked to sign a briefing release form which signifies that you're on your own in terms of liability and that you don't mind being filmed. Regarding illegal, bear in mind that you are very visible in the pillow, and visible lawbreaking is punishable by endless inconvenience. Changing that requires some other kind of event. The subject of this one is: you are what you eat.

Believing him, I began to wonder what belief was made of. Clearly, some form of personal experience, such as knowing an author, or knowing hunger and overcrowding. How many of us arrogant world-shapers *know* hunger? Could we learn it and teach it at the same time? The Hunger Show took shape.

Publicly it was a failure. We lost the focus of the plastic pillow and we lost the focus of staying in one place. But internally among the starvers, we connected with our bodies, with each other, with the Depression generation, with the Third World, and with the future in ways and depths that we're still sorting out.

—SB



This is the inflatable pillow, 100 ft x 100 ft of 4 mil polyethylene, that the Fire Marshall wouldn't let us use for Liferaft Earth. It was designed by Charlie Tilford. A month later the Fire Marshall okayed the structure for public use under a physicist told that it was "self-extinguishing," which it is.

## Liferaft Earth

Robert Frank's 37-minute 16mm color sound film of the Hunger Show staged last October by Portola Institute may be rented for \$30 from WHOLE EARTH CATALOG. "I'm sorry, Leon," said Bonnie Jean, "I'm hungry and I'm crazy."

Before saying how this Hunger Show went, I want to suggest what could be. Muster a travelling troupe of skilled improvisational actors and divide it into two or three sub-troupes. Set up a tour through college campuses with pre-publicity and all that. Starting on a Monday at each campus a hunger show begins in the theater, with the participants—one sub-troupe of actors and however many voluntary students from the college—confined behind chicken-wire on the stage. Let 'em starve all week, building publicity, to a paid-audience performance on Saturday night. Now the troupe cuts loose, laying in every kind of stress and issue, trying to burn or pray their way to the center of the population madness. Let whoever was the "leader" have a cowardly death and departure. Serve food to the audience. And so on. For the last day, Sunday morning, let audience in admission-free for what I can assure you is holy communion—the first food for the starvers.





There were as many Hunger Shows as there were participants (170, counting those starving on the Hog Farm buses travelling from New Mexico during the event). So rather than try to solo a description I'd rather ride tandem with Rick Field's account and Tari Rein's mid-week report for the *Berkeley Tribune*.

From *Berkeley Tribune*, Oct. 17-23, 1969

The highly public place turned out to be a parking lot for a motel turned poverty center in Hayward, California. The Southwest Electric Campfire nonad architects circled the concrete with a polyethylene air-filled wall about four feet high. It had been planned to hold the show inside a giant space-egg of the same semi-transparent membranous material. But the fire chief declared it a fire hazard, so the wall was a last-minute innovation. Not until it was fully inflated did we realize it looked exactly like the supposed one-way door closed at 6 P.M. Saturday.

People kept arriving as late as Wednesday. It was decided to let each new-comer ask everyone on board for permission to join. They spoke to us from the wall, using a microphone. The crew then voted yes or no, usually by voice.

No one was denied. Though a sizable minority wanted to stick to the dead-line.

The first division appeared here: some took the Liferaft as a vow, and wanted to play the game close. Others didn't like the role of insider refusing outside; they pushed for the opening up of the Liferaft game. A familiar commune problem, population pressure, how not to close off and yet not be swamped. We, however, had enough room—at least we did as long as we stayed in Hayward. And we had no problems feeding everyone. There was enough plain water, ice, and even an occasional turt of hot water, "tealast tea." We had none of the kitchen problems of large groups. No hassles about diet, cooking, cleaning. (Though we did have our share of talk about food, especially diet.) But neither did we have the unifying ceremony of a common table.

When you don't eat you have nothing but time. One corner of the raft was given over to the technology of communication and time-filling. Running this Liferaft brain-center was our jester of ceremonies, Wavy Gray, Hugh Romney of the Hog Farm Family.

The first days records were played whenever no one was speaking over the sound system. Imaginary, usually elaborate, meals were read for breakfast, lunch and dinner. Games were played with prizes of plastic fruit. News-casts kept us informed of events inside and outside

← The inflated surround was a wonder. Ideal minimal barrier. A product of desperation, it couldn't have been invented better. It was pure vulnerability—you could fall over it or cut through it easy as pie. We were contained by will and barely anything else.

Singing in Saturday afternoon was a ceremony. You weighed yourself on this funky scale and signed your weight and name with a pen embedded in a plastic apparatus into a big impressive Hog Farm book. Bonnie Jean conned and supervised. This ceremony and the many others were the product of Wavy Gray's insistence on dramatic forms, hard edges to the game. "Play hard and play fair" is a place where he lives. It can unfuzz your mind.

A hundred or so people. It wasn't enough. We weren't crowded. (Goodbye, expectations, you never had a chance.) And we weren't reflected on ourselves, open sky inflated everything from us. All we had in common was plastic fence, the mike and sound system, and only gradually hunger. Without the open mike the event would have been nothing. The sound system was our mutual consciousness, however cluttered.

Who was there? An odd lot. A scoutmaster and his wife. Catrino, 52, high school girls. A guy, never identified, who looked like the vice-president of an electronics firm, and made it through to the end. Ecological politicians (no offense). Keith Lampe, Stephanie Mills, Gene Schoenfeld, me I guess, others. Hog Farmers, hard core and fringe—the substance of our population (Bukowich, Tom Law, Reno, Ruffin, Sunshine, Danny, Gloria, & B). A blind girl. The filmmakers Robert Frank and Danny Lyon. Student pres. from SF State. One of the staff from the poverty offices. Dick Raymond from Portola Institute. No narcs.

Liferaft Earth  
Whole Systems

the raft. Six medical students had started fasting in Salt Lake City. The Hog Farm convoy of seven buses was on route to join. Sixty of them had begun to fast on Saturday.

We also watched a UN starvation movie on a sheet hung from the poverty center balcony, and listened to a tape of Kafka's "Hunger Artist."

The light-heartedness and activity were helpful, but beneath it all there was the growing awareness that the sound was never off. Since the raft was wall-less there was no escaping. Noise pollution of our own environment by our own entertainment. The amplification was using us more than we were using it.

Some Liferafters left because of this. But those who left without first trying to bring up the problem via the open microphone—it was there for anyone to use—did not grasp that we Liferafters could change anything we wanted to change.

Had the model of Liferaft as Earth been more deeply felt, there would have been more active caring. We create our environment. We cannot pretend the world is not our environment—an object outside—for we cannot leave it. It follows us even as we destroy it.

Thus leaving the Liferaft because of not liking its environment was like leaving the earth—an impossibility. Yet many left, giving up the game and the vow.

Quite simply, the Liferaft depended on the people in it. Some saw this. Others treated the event more passively. They came out of curiosity and stayed as long as things were "interesting." Not seeing that the "interestingness" of Liferaft depended on the people in it. Stewart Brand, the inventor of the Liferaft idea, was conspicuous by his silence. More interested in what would/could happen than in making it happen.

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On Sunday ABC-TV arrived. They were filming a special on ecology activists. They were on our side. Could they film us from within?

Another division: some Liferafters were dead against mass media; they were the enemy. Others felt we could use them. Still others felt we could convert them, by being open and friendly.

The decision was to let them come in if they fasted with us. ABC pleaded. They had important work to do, useful work. They couldn't spare the time. So they filmed us over the wall. Anyhow, we had our own media inside, Robert Frank with a empty stomach filmed ABC filming us.

Since the door was closed at 6 pm Saturday, the music, the color TV, the four microphones, have been blaring 24/7.

Saturday night, Reno-the-jacks-coach held the World Series of Jacks, After exhausting preliminary matches, Susy B, upset the much-lauded Gloria, much to the delight of Hayward fans watching from the perimeter.

← Rick, I was wasted. As much cogeny as I could muster was sliding out over the telephone lines to the reporters who kept calling. Stephanie and I were the names they knew to ask for, and whatever we said on that fucking phone is what appeared in the newspapers—it shouldn't be that way, but that's how it was, and it drained us.

It was far better with the TV people, because they had to come to the scene and would interview more people. More important, they saw us, and saw us diminish, and began to identify. That never happened with the newspapers and radio interviews.

If news is as important to social consciousness as everybody says, how come there's so much sloppy reporting? Associated Press (via phone) conjured the news that Dr. Schoenfeld was denying people aspirin for their headaches, and that fiction was printed throughout the United States. Some of the underground coverage was better, some was worse. You pays your money and you takes your chances when you read a newspaper.

# LIFERAFT EARTH

With the arrival of the TV crew we felt how exposed we were. Flat parking lot concrete. Hot sun. Cameras. The good citizens of Hayward peering at us over the wall, as if they had never seen fasting long-hairs before. Some of us got uptight, tried to find a spot as far away from the eyes as possible, but finally there seemed nothing to do but become transparent, get used to it and continue living.

A question about getting high. Some people smoked grass, as discreetly as possible. For others, the paranoia level was too much—all those people watching. Others preferred meditation, yoga. The first three days we did group breathing exercises. (Meditation and yoga seemed good survival skills: it was easier to survive the noise, tension, nothing to do when it gave moments of solitude in a week of constant social living.)

Truly, the Eyes of Hayward were upon us. But it was all right. Most spectators had never had the chance to observe tribal ways so closely.

The transparency phase didn't last long. Kids invented the game of punching holes in the raft. A Hole Patrol was armed with tape. It became clear that most spectators didn't know what we were doing. Some Liferafers wanted to go outside the wall and talk to people. Some wanted to let spectators wander around inside. Most of us felt exposed enough. Again, the open/closed division. Gandhi said, if you can't get through to people over the wall, you can't get through to them outside it. The end result was that more of us spent more time in communication yoga, rapping with spectators over the wall.

It was twenty-four hour parking lot theater; the main action was not eating. Suspense was supplied by how long we would last. It was hard for many spectators to see the connection between our "game" of not eating and getting along with each other and our "message." It was hard for some of us to see the connection also. Anyone who didn't was welcome. And some came just to fast, as self-purification, as a joyous, positive act. To some the link of fasting to starvation ecology politics was a bring-down.

The political/spiritual dichotomy was always present. Yet for many of us it was not real. Some learned what it was like to fast; some learned what it was like to be hungry; most of us learned both.

Fasting to get high, to purify, to understand the root fear of infant helplessness when the breast did not come on time; did not cancel out fasting to know hunger, to call human attention to present and future starvation of food and space and silence.

"Political" and "spiritual" were not only mutually exclusive. They were mutually interilluminating, as interdependent as the life-support system. The Liferaft experience was a continuum, a sliding wave-length between the two conceptual extremes.

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In case there's some question what Liferaft Earth was about, it was about this

Tom Law and Reno led the yoga breathing exercises. I meant a lot to do something with the body that was growth, not further shrinkage. We were doing something in unison, and that meant a lot.

On Sunday, the crew built a swimming pool and we spent the day lounging in the sun at our microcosmic Country Club.

The following day remained cold and cloudy and the crew kept warm with football, frisbee, flying kites, darts, and yoga.

We also tried a Hog Farm specialty, the Gong-Borg. A group of people got in a circle, hold hands tightly, then squatting, breathe deeply 14 times. Slowly stand up, raise your arms, holding the last breath. Then let out any sound that your lungs make. It's a very strange high. I fell to my knees dizzy, the dude next to me passed out.

Then, gong-bonged, we stayed in the circle and the microphone was passed around for each person to say who he was and why he was on the Liferaft. Wavy's right: this should happen at every event where people are staying together. What people said was strong clear stuff. By the time the mike came around I had to talk through a considerable lump in my throat.

By the second night crew members were asking other crew members for permission to leave the raft, keep the fast on the outside, and then return. By this time we had evolved a method of decision making: we would make no decision about future policy. Leave if you want and ask for permission to re-enter when you get back. In practice, people left and came back without much trouble. Maybe five, give or take a few. But there was a growing group feeling that people should not leave and then return because it was becoming clear that the difficulty was not only fasting but staying in this often insane place with the same people. (Most of us had not known each other before. We ranged from age 16 to 52, from scoutmaster to beyond description.) What it came down to was, if you felt people shouldn't leave, you didn't leave.

We were not in a beautiful spot. We sat, walked and slept on concrete. Longing for trees. Calvino talked about organic gardening. Maybe we could bring some earth into the raft. At least the sky was there, if you lay back.

Hayward was the kind of place you get marooned in while hitchhiking. Cars slow down just to look at us, never to stop. But as far as the ecological consciousness of Liferaft—it was perfect. A hungry crowded concrete future. And the people could step right up and see it, for free. It was also good for us to be out there in the middle of parking lot shopping center america, talking to people far from hip ghettos. It was intensified by that empty, spaced-out lighter than air feeling of hunger. And it was funny, how many of them were impressed by our not eating. We were Fools but we were doing something that was beyond them. Some heads got opened. Not making a big serious deal of fasting was our best Fool's way. We gave the microphone to somebody munching a hamburger. Spectators—a few—wanted to know what they could give us. Since food was out there wasn't much. Some of us struggled through Ehlich's "Population Bomb", to know what we were talking about. (It was hard to read after the second day; eyes kept slipping off the page.)

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Rain clouds on Tuesday. We inflated our common shelter—a smaller version of the original space-egg. A warm drowsy secure nest. But it was called a fire hazard, even though it was raining. Soon we had a shanty town of scrounged plastic and wood lean-tos. Private property. The common one-sky-one-roof feeling disappeared. Small groups invisible behind their plastic. No longer could you spend time just drifting around the parking lot, bumping into people, picking up on what was happening.

Originally, this "Hunger Show" was scheduled for a nice grassy place somewhere in San Francisco. But with city officials uptight and no one willing to offer enough space, we ended up in an asphalt parking lot in Hayward, thanks to Hayward's Poverty Director, Bill Goetz.

Bill is one of those rare people who can work in and out of both sides of the social spectrum. Fully aware of the problems we're faced with, yet with the ability to solve some of those problems by dirtying his hands with government agencies.

So on second thought this parking lot in Hayward, stereotype suburbia, couldn't be more appropriate for this ecology protest called "Liferaft Earth."



[photo: Oxfam]





Tuesday, getting bleak.

The rain that night was just too heavy. We found shelter in the poverty center office. People and sleeping bags soaked through. Started the morning with chanting. Rain continued. People left. Report that Liferaft was sinking because holes could not be patched because of wet plastic. Report that a stop sign had been thrown into Liferaft during the night. Decision to abandon Liferaft—we couldn't stay in Center office—and continue Liferaft in back room of Whole Earth Truck Store. (No place else to go.)

Many of us left during the move. Everyone condition/placement changed we lost people. Keeping open to moving and change was harder than fasting for many. We were wet, tired, fuked. The room was warm and dry and much much too small. We covered the floor with dry sleeping bags and the walls with wet clothing. Again, the model of a crowded hungry lustre, but many people living in insect closeness. Of course for a while it was nice and cozy, close comfortable groups laying around, taking it easy. But. The L.A. in the corner reached every ear. Cries of L.A. it down. Cigarette smoke, duplicated L.A. air. Many, able to stop eating, were unable to stop smoking. If you took a step, you had to step over somebody. After a few hours of this more and more people died.

A general goofy punch-drunkness. Some avidly read cookbooks, especially saving the big glossy illustrations. A TV crew arrived. Wavy Gray passed out all the toys he had left. During an interview with Brand some crew member blew bubbles in front of the television camera.

We took stock. The three days in Hayward were over. We had plenty of publicity—on the news every night, talked to too many reporters. Now when TV or radio men came most people hardly stirred. Nor was there much interest in watching ourselves on TV. The Log was hopelessly out of date since people were leaving without bothering to weigh-out.

With the sky gray and threatening, like a scene from the Old Testament, with the fourth day of hunger producing weird and mellow hallucinations, the entire Liferaft Earth seems more surrealistic and more absurd.

But sitting here, looking out across the "Hunger Show", sitting here in Liferaft Earth looking across the desolation of this Asphalt-Parking-Lot in Hayward-Wasteland, I can still remember that this macabre and absurd scene did not surpass the outside world I came from.

Tuesday night. The rain kept coming down that spring night. ("No rain this week," the weather bureau had said.) People were 3-days weak and now were soaked. ("Two more days of rain," the weather bureau said now.) The Pneumonia Show, I started waking people up and sending them into the plastic tube—it wasn't dry enough, and the Fire Department would chase them out. We'd have to leave the enclosure. I stood by the door "ARE YOU READY TO DIE?" for two breaths, and pushed on. The key I had to the big building didn't work. I called Goetz and he came down to open his office. Warm dry office gradually filling wetly with people. Wavy came in. He'd been in the hospital. Bonnie Jean was later nearly hysterical; she's been searching for him all this time in every pile of junk in the enclosure. I go back out to get the final refugees. Rain and wind. What I hear, walking through the debris, is "This is the way the world ends... sooner than expected," only not that dramatic. Just a caption.

I was impressed, that people as weak and fucked-up as we were could clean up the parking lot and move out so efficiently. We kept discovering that, now as you get weaker you still can do what you have to, only you do it better. You get kind of simple-minded, I think. It makes for good press interviews: you're too weak to talk anything but the middle of the truth.

Robert Frank stopped by to tell us he'd died driving over from Hayward. He felt the movie he'd been trying to make had been in the parking lot. If we'd stayed there, stuck it out... He obviously didn't feel too good. We'd watched his last movie, "We and My Brother," staring Julius Ordo, in Hayward, projected on a sheet; it was depressing to lose him.

The seven Hog Farm buses arrived that night. Painted with "Liferaft Earth Hunger Show", driven from New Mexico through breakdowns and hamburger highways. It was just Thursday. Sixty or so had managed to stay alive, driving, feeding kids. Others hadn't started the fast or had died along the way.

Back in the Hayward parking-lot—hearing that they were now in Reno, that they had to fix a clutch in Las Vegas—we had talked of the energy we would receive when they joined us. How beautiful it would be. The vision of sixty more Liferaft people coming as our numbers dropped.

But we did not run out into the rain and embrace them. Instead we stuck stubbornly to our remaining structure—probably because it had in fact fallen apart and we were doing our best to keep going. But we went through the whole trip of our Group: Stop at the door, are you alive or dead, weigh-in, and so on. One by one. Since many Hog Farm people were dead, having eaten, and needed to get out of the rain, see friends, dry off, stretch, use the bathroom—the game at this point was just in the way. Living and dead from the Farm all

had the same living problems. The pure Life-raft of only fasters was, by necessity, a thing of the past. But we held on tight to our conception of what we were doing; or our conception held on tight to us.

Understandably, many brothers and sisters from the Farm were unhappy. Thoughtlessness and our weary apathy were received as negative vibrations. Farm people felt a come-down from their cross-country bus-life-Liferaft. Not that it was all bad. A lot of what happened was just fine, embraces, smiles, sharing. But there were just too many people in the room. Kids and dogs running around. More people kept coming in to the room from the buses. Before our eyes our population exploded. Out of over-crowding, misunderstanding. Arguments over the microphone. Some trouble within the Farm. Somebody wanted to discuss the wording of the original Hunger Show leaflet. Finally twenty-five of the newly arrived Farmers walked out and died across the street in a Chinese restaurant, Wavy Gray, torn between communes, said he was leaving because so many of his Family were leaving. He looked miserable. Somebody said, But you can't go, we're in the middle of the organizers. Somebody answered, That's the trouble, there aren't any organizers, it's what all of us do.

## LIFERAFT EARTH

The scene Wednesday at the Truck Store was harrowing. This was my most protected research haven. With well-to-do people in it I was fast-track. Now we were reflected on ourselves. "This is it," said Wavy. "This is the 21st Century." With the arrival of the Hog Farm buses that night (still raining), it began to get really interesting—jammed with people now, and tensions rising and procedures trying: everything from this point on is news because nobody knows what happens next. We never found out. A long slow reading of the Ming up everybody to sleep. The next morning Menlo police came and said to leave.

That was a strange scene. I was in the parking lot of my own store raving at a cop, wondering if I was going to jail there. He was a polite cop and I was no polite citizen. I didn't hit him, but was going to do it in the press, when Dick Raymond (who'd left and eaten, because of a dick in the family) came up with an original thought: Let the cops go. Hinge against cops is a boring and useless story. Go to Portland's place in the mountains, Ortega Park, and don't tell the media where we're going. Keep the fast, but get some rest, and do what we did. A reporter from Channel 7 said as we departed, "Is there anything else I can do for you, besides leave you alone for a few days?"

### Wednesday, the full catastrophe.

At this shock-point one Hog Farmer took the microphone, and said, Listen, I have this book, you ask it questions and the answers will be instantly instant agreement. Bring in the Book of Changes, to help us through our changes.

A call for silence. People meditating, going into trances, quieting down. We passed the bundle of yarrow stalks around. Over ninety people touched them, held them, heaved with potential. We all placed our hearts in the straight-crooked stalks, falling apart together. Intense highly charged stale late night air.

"The Arousing: Thunder repeated: the image of shock. This in fear and trembling the superior man sets his life in order and examines himself." Changing to The Receptive: "Since there is something to be accomplished we need friends and helpers in this hour of toil and effort... to find friends means to find guidance." The words flashed away our weary collective stupidity. There was no discussion afterwards. The whole room began breathing normally. Wavy Gray took to heart the section dealing with the leader, that "... this is also a time of planning and for this we need solitude... In this sacred hour he must do without companions, so that the purity of the moment may not be spoiled by factional hates and favoritism." Wavy Gray returned to his air mattress and announced that he would not speak until the same time tomorrow. They signed off.

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The police in Menlo Park also thought the Truck Store was overcrowded. Our third and final move was to a house in the mountains. It seemed a reward for going through all the rest. Walking through the forest, under clouds, pine-needle ground, hunger-sharpened taste buds feasting on fresh air, remembering I haven't been alone since the fast began. Please, Please, please let the trees and space enough for space.

All of us are here. The Hog Farm, fasters as well as non-fasters, visitors who can find us. Robert Frank returns, asks to rejoin, resumes not eating, and brings out his camera. All Structure has disappeared. No games, no news reports, no hard and fast line between living and dead. Energy comes for clear headed moments, then evaporates, then returns. Non-fasters cook elaborate meals constantly. More people die due to proximity of food but most of them don't leave. Someone proclaims, "There is no difference between the living and the dead." A comfortable wandering chaos.

One radio station reports we've given up, another, closer to the truth, says we're in hiding. We wait and take showers. Wavy Gray, in all day silence, covered with bacteria, ceremoniously presents a glass of water to everyone as they arrive from the Truck Store.

Thursday, Friday at Ortega. People who had "died" were cooking constantly in the kitchen, eating four or five meals a day in front of close friends who were starving. They weren't doing it meanly, as much as if with much hunger around, someone had to do a lot of eating. I have a feeling that this is the beginning of the end. The first one place marked by over-eating in another to compensate.

The return of Robert Frank and Danny Lyon. "I woke up this morning," said Frank, "and I felt terrible. I had to do something about it. I'm glad Robert had some food. He couldn't carry the camera any more." During the week Tom Albritton had an article in the San Francisco Chronicle about Robert's involvement in the Hunger Show, titled "One Man's End to Cynicism."

Ray Sebern, artist.



Friday, final meeting on the final issues.

We meet and try to discover an end to what had a beginning. Survivors decide to all sleep upstairs, then break the fast together. Press is invited. People give up their financial dinners and agree to break fast on stewed tomatoes with a little salad later, as suggested in a book. Frank takes movie and tape snapshots of all survivors; some speak; some just look into the camera.

\*\*\*\*\*

Sentient beings are numberless, starving and driven mad by over-crowding; vow to save them all.

A vow is making a choice not to choose at each changing moment whether to stay or not.

Survivors took the experiment as a vow.

Here Liferaft opens out, game into world. Because there is no denying the vow of birth, of living with this world; it follows us where-ever we go, whatever we do; there is no other choice for living because there is no other place to live.

The TV newsmen said, "Well, now that you've made it through this week and I see you're having some food, how do you feel?" The same guy who answered with a simple heartfelt murmur, "This is Christmas," was the guy who had nightmares for a week that the Hunger Show was continuing, and eat pale and painful. That was me. That was my end of it.

The one Richard Brautigan saw happened back on Wednesday, around noon, after everybody had taken their sopping gear and split to Menlo Park. Brautigan surveyed the empty parking lot with its smelly outhouses and outline of deflated plastic. He peered around in our tidy pile of trash. He stood by the still-standing doorframe and listened to the sound of the rain on the plastic. While every so often the are-you-you-to-die door swung slowly open and blam shut in the wind.

Saturday, Pigasus, Wavy Gravy (scrawny gravy—down 20 lbs.)

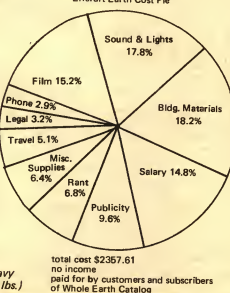
Fasting at Ortega was simpler: endurance. Bonnie Jean was now unable to walk, and Wavy carried her from room to room. Tom Law and Reno were hating around organizing their Symposium. "The yogis," said Bonnie Jean, "are mountains."

Friday afternoon was a big last meeting, partly on Hog Farm business, partly Hunger Show. Wavy was making his farewell address to the Hog, signifying a new period for him of "fast yoga," on one quick bus, next destination the Chicago 8. For the Hunger Show, it was finding a way to bring a loose show back together and end it formally Saturday morning, on schedule.

Saturday morning, the first bite of food—a squeeze of lemon, some avocado, stewed tomato—went off like fireworks in the body. Everybody's smiling, everybody's chewing. We had a kind of diploma printed up for those who made it through, and people are signing each others' diplomas like high school yearbooks. "Best of luck in '69. Petty-cake."

Who are the survivors? Gandalf is manning the logbook and the scales and has the total: 52 survivors. Quite a crew. The hairiest and quietest of the starters. Lot of girls. Roy, Calvin, Rick, Amy, Wavie, Bonnie Jean, Ruffin, Tom, Reno, Steven, Martha, Peter, Jim, Bob Redhat, Dick Duncan, Tim, Buffalo Bob, Gil, Eben, Jerry Lamb, ... roll-call of the living.

Liferaft Earth Cost Pie



## ECH-OLGY

My mother is right, at last at last  
So fast, fast, to fast & fast  
In India, China & Peru  
The last meal has got to be you.

DDT & a BM  
The teeth of reason grind again  
Fuck no more for heavens sake!  
Save the world from the old fuck quack.

\$1.10 and I'll make you sterile  
Get your rocks off the moon  
(balls of beryl)  
Kids are made by fools like me  
But only the pill can make you free.

Man is a mucker (Cain mucked Abel)  
Don't throw your beer cans under the table!  
God's in his penthouse—all's right with the world!  
He's got a Disposal for all things soiled.

Make room for God! (Heak come de judge!)  
In a crown of garbage, with a scepter of sludge  
Man the mucker at his right hand side  
Red, R. Filth his sinister brids.

Enwail  
Breathe while you can & fuck while you may  
Species past mother day  
Yes dent take yer choice so yes: payz yer fee:  
The earth a desert & death home free.

—Tuli Kupferberg  
From "Earth Read-Out"  
439 Blynton, Berkeley 94707

## Time release

A year ago, when you did Liferaft, I felt a little surprised that you were putting energy into a paranoid trip. I was also a little curious, a little envious, as I watched people leave here to go and participate. I had never lasted. Six days ago I began a fast, my first; and as I began I knew it would last at least seven days, because Liferaft had been seven days.

I sat today for a long while under a green tree looking up at the sky through the leaves. There were many different shades of green and as the sun moved the patterns of the leaves changed; it was very beautiful.

For some reason I found myself remembering a sentence from a science book I'd been reading: "Probably 500 million children in the world today are so undernourished that they are suffering permanent brain damage."

Since I came to live in the country I have been keeping less information out of my head. I don't want to listen to horror stories when I could be chopping wood or canning blackberries or telling a story to the kids. I refuse to worry about something that I can't do anything about. But this sentence didn't feel like that. There I was, under a tree, surrounded only by good things, and yet I knew that on this planet children were hungry real children, children that I could easily reach in a day's time (given enough money and a passport). They were inside my head, and it was right that they were inside my head.

I don't know where to go on from here. It feels like I am climbing aboard the Liferaft, a year late.

Elaine  
Cave Junction, Oregon



AT HOME WITH THE LONE OUTDOORMAN

So far that day the Lone Outdoorman had motorcycled to the toilet and back, and hiked around Section B of the Eagle Rock State Park campground. His plan had been to stop off at his camper for a beer and a bar of pemmican, and then go hunting over in the park amphitheater with his new AR-15 semiautomatic double-barrel over-and-under. But after he'd noticed the hippie queer bawling the two foreign ladies in the red tent, he decided he'd better hang around the complete just in case.

He wanted a beer really badly by now, but as an act of discipline he kept his cooler closed, and satisfied his thirst with the warm water in his canteen. He considered forgoing a beer as an act of sacrifice for the ladies. As women, alone in the wilderness, they had a right to expect that much of him. He owed it to them, to the cause of westward settlement and civilization in general, to keep alert and ready until the threatening element among them had been dealt with in some sure and final way. Maybe it had already been dealt with. Maybe that little show of force right there in the hippie queer's own campground would be sufficient to keep him from running amuck. The Lone Outdoorman hoped it would. He sincerely hoped it would.

For he was a peaceable man. He'd fought the war to make the peace. It was his most fervent hope that peace would in fact endure, so that women and children could be safe in their homes, to grow and learn and become good citizens, so that people like these two foreign ladies could come to America and witness the magnificence of this great land from sea to shining sea in freedom and safety. Let the foreign people come to America, he thought. Let them experience our great mountains, our flowing rivers, our abundant wildlife, our historic monuments, our magnificent parks, both state and federal and our majestic canyons, deserts, plains and lakes, both fresh water and salt. Let peace reign, he thought. Let the people come, and enjoy and be free. And let the freeds and queers and Jews and motorcycle gangs be goddamn careful when they fuck with the Lone Outdoorman.

The Lone Outdoorman took another pull from his canteen. As he hoisted it again he passed through his curtains and saw a suspicious thing: the threatening element next door was trying to sneak away, to rendezvous with a band of confederates over by the river. The Outdoorman reached for his AR-15 semiautomatic double-barrel over-and-under and prepared to fire. But then he lowered the weapon and through clenched teeth muttered, "I think I'll follow that son of a bitch." He slipped the rifle on the wall and got his .357 magnum pistol out of a drawer and hitched it to his web belt.

As Divine Right disappeared into the trees in the rear of Section C, the Lone Outdoorman stealthily trailed behind him.



## The User's Guide to the Protection of the Environment

The consumer has more power for good or ill than the voter. All of us ecologically-concerned citizens have frets of creeping hypocrisy when we enter the supermarket all unknowing or half-knowing about the effect of our purchases and refusals to purchase.

This book is a *freit-reducer*. It defines daily virtuous behavior toward ecological good. —SB

**The User's Guide to the Protection of the Environment**  
Paul Swales  
1970; 312 pp.

\$1.25 postpaid

from:  
Ballantine Books, Inc.  
101 Fifth Avenue  
New York, NY 10003  
or WHOLE EARTH CATALOG

## Earth Tool Kit

From Environmental Action in DC comes a handy guide for political action toward ecodom. Pretty slick information here.

**Earth Tool Kit**  
Sam Love, ed.  
1971; 366 pp.

\$1.25 postpaid

from:  
Environmental Action  
Rm. 100  
1346 Connecticut Ave. N.W.  
Washington, D.C. 20036  
or WHOLE EARTH CATALOG

## The Environmental Handbook

The *Environmental Handbook* as "the bible" of New Conservatism. Prof. Ehrlich, the others, as prophets predicting the literal end of the world. *Ecology Action*, the others, as young disciples working zealously to save it. The *Survival Walk* from Sacramento to L.A., as a modern version of the crusades. The public outcry against pollution as an evangelical call to cast out evil. San Jose State students actually burying a dead whale, in the form of a new *Merkur*.

What Lynn White Jr. says: "Human ecology is deeply conditioned by beliefs about nature and destiny—that is, by religion. The victory of Christianity over paganism was the greatest psychic evolution in the history of our culture. . . . We continue today to live, as we have lived for about 1700 years, very largely in a context of Christian axioms. . . . Christianity, in absolute contrast to ancient paganism and Aale's religions, . . . not only has no dualism of man and nature but also insisted that it is God's will that man exploit nature for his proper ends. . . . [Christians] are superior to nature, contemptuous of it, willing to use it for our slightest whim."

Conservation asking Christian America to quit being Christian America, America saying *am*, I need the money.

Psychic revelation. Beginnings of religious war. Christ a space-age anti-Christ. Battle in the cockpit. Veer left, veer right, 66,000 miles an hour. Off course! Quick! Somebody grab the wheel!

[Reviewed by Gurney Norman]

## Ecotactics

The *Sierra Club's* paperback *Ecotactics* was published two months after *Friends of the Earth* brought out *The Environmental Handbook*. The difference shows, but not enough to hurt. If the *Handbook* had been there first, *Ecotactics* would be a better item indeed. It's not quite as punchy as *The Handbook* but it's got a lot of good stuff in it, most of it by ecology writers I hadn't heard of before, which I consider a virtue. I mean, I've heard Paul Ehrlich and Rene Dubos and other big guns who appear prominently in *The Handbook*. I know what they have to say. It's encouraging to see just how many good young writers the whole ecology thing is producing. Since both books cost only 95 cents, the serious ecology revolutionary by all means ought to have copies of each. They complement each other, sort of fill in each other's holes. For example, *The Handbook* contains Gary Snyder's now famous environmental manifesto, "Four Changes", while *Ecotactics* presents a short article about Snyder himself, as a man, poet and a naturalist. Both statements deserve wide audiences. So do both the books as a whole.

[Reviewed by Gurney Norman]

## The Tassajara Ecological Thoroughness Prize

is awarded to the students at Tassajara Zen Center, who drink their dish water. When you finish eating, a lady student pours hot water into your biggest dish. You take your elegant little cleaning cloth and pour the inside of the bowl, then pour the water into your smaller dish and dry the first dish. You repeat the process into your third and smallest dish, scour it, and then drink the water, which is a sort of garbage tea, tasty and nutritious.

**4 Ecology Action**  
Whole Systems

## WATER CONSERVATION IN THE HOME

Minimize the amount of water you use and the waste burden you impose on the sewer system.  
Fix leaky faucets and toilets. The steady flow uses up a considerable considerable volume.

Food waste disposal units are about as ecologically unsound as an appliance can get. A disposal unit will increase the load you impose on the sewage system by 25%.

Plant lawn covers and shrubs that will be able to get along with a minimal amount of sprinkling.

Don't move where the water is scarce.

Don't use your sink as a dump. Drain from washing garbage, detergents, and chemicals (e.g. Dettol) into the sewers as much as you can.

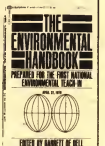
Never use pesticides in such a way that they could contaminate either ground or surface water.

Don't use salts in the winter to free walkways of ice. This practice is ruining a growing number of wells in New England.

... "If the options are traveling in an old jalopy with two passengers and a driver, taking a half-full bus, a half-full plane, or a half-full train, the options would rank in turn: 112 gm/100 passenger miles, bus (27), jet (160), and auto (2666) in terms of CO emissions. . ."

The press release is, in effect, a news article. It must be clear, interesting, readable and to the point. In its first sentence (the lead), five questions should be answered—who, what, when, where, and why. Reporters will essentially be rewriting a press release for their articles if there are no other facts at hand, and everything they need should be included. If the lead is clear and informative, local radio stations may also pick it up in their hourly reports.

To be effective, the press release must also be timely. One of the media's strictest rules is the deadline, and that must always be taken into account. For morning papers, the deadline is around 7:00 P.M.; for evening papers, around noon; and for evening television news, about 4:00 P.M. Reporters should receive releases substantially ahead of the deadline, preferably by several days if the information is important. Releases should be marked "press release" and should include a release date, or a time when they are to be announced. Groups must also include on every release the name and telephone number of a person who can be contacted for further information or any questions. For best results, the envelope should be addressed to the attention of a syndicated newsmen.



**The Environmental Handbook**  
Garrett De Bell, editor  
1970; 365 pp.

\$ .95 postpaid

from:  
Ballantine Books  
101 Fifth Avenue  
New York, NY 10003  
or WHOLE EARTH CATALOG

The phrase, "health of the environment" is not a literary canon. It has a real biological meaning, because the surface of the earth is truly a living organism. Without the countless and immensely varied forms of life that the earth harbors, our planet would be just another fragment of the universe with a surface as drab as that of the moon and an atmosphere inhospitable to man. We microbes being exist and enjoy life only by virtue of the conditions created and maintained on the surface of the earth by the microbes, plants and animals that have converted its inanimate matter into a highly integrated living structure. Any profound disturbance in the ecological equilibrium is a threat to the maintenance of human life as we know it now.

Rene Dubos

## The Voter's Guide to Environmental Politics

Read this book if you intend to recycle wastes, write letters to politicians and business leaders, testify in court actions, design posters, raise and donate money, and public transportation, walk precincts, limit the size of your family, and vote intelligently.

[Reviewed by Richard Raymond]

**The Voter's Guide to Environmental Politics**  
Garrett De Bell, ed.  
1970; 314 pp.

\$ .95 postpaid

from:  
Ballantine Books, Inc.  
101 Fifth Avenue  
New York, N.Y. 10003  
or WHOLE EARTH CATALOG

The Friends of the Earth chart on how your congressman vote on critical environmental issues, reprinted in this book, is available as a wall chart at \$06 from Friends of the Earth, 917 15th Street N.W., Washington, D.C. 20005. Evaluations of congressmen are done by many other organizations and you would do well to get the one from any organization which you feel represents your interests. All of these voting record analyses must be used with discretion because of the problems, discussed in the chapters on Congress in this book, that many key votes are not recorded and congressmen often change their votes. They will be recorded as a roll call vote. Hopefully, the bill now in progress to require all votes to be recorded as roll call votes will pass before the end of this Congress so you can know your congressman's position more fully.

Several complicated measuring and monitoring devices exist to detect the presence of lead, boron hydrides, arsenic, hydrogen fluoride, combustible gases, and other potentially harmful substances. Some other companies which should be contacted for information are:

Foxboro Company  
367 Neponset Avenue  
Foxboro, Mass. 02035

Mast Development Company  
2212 East 12th Street  
Davenport, Iowa 52803

Technicon Instrument Systems  
Dept 104  
Tarrytown, New York 10591

Analytic Instrument Development, Inc.  
250 South Franklin Street  
West Chester, Pennsylvania 19380

Micronesian "out-lander" in particular—that is, those who live across a hundred miles or more of sea from any neighboring islands, and whose contact with the rest of the world is limited to the few souls who arrive on the eighty foot government boat every six months—simply don't think about infinity, or even to put it more accurately, the idea that everything is possible.

In order to survive out there by themselves, they've had to gain a certain feeling for the enormity of the breadfruit production and the coconut agent. In some of those places the highest crime is cutting down a coconut tree without communal permission.

Jerry Mander

By conventional bookkeeping methods, for example, the coal companies strip-mining the hillsides of Kentucky and West Virginia show a handsome profit. Their ledgers, however, show only a fraction of the true costs of their operations. They take no account of destroyed land which can never suffer another crop; of rivers polluted by mud and seeping ash from the spoil banks; of floods which sweep over farms and towns downwind, because the ravaged slopes can no longer hold the rainfall.

John Fischer.

## Atrocity

Last week I saw some copies of *The Environmental Handbook* (Ballantine) being carried out of a book store to be burned. Their front covers had been torn off and returned to the distributor for refund. The books had been on the shelves too long without being sold, so they had to be disposed of to keep the stock moving. It was too expensive to ship them back to the publisher; the distributor had no room to store them; so they were being burned—not recycled—BURNED! The bookstore manager said that in about 6 months when demand had built up, he would order more copies of the book, which of course would be new, meaning that more trees had been cut down for paper, etc. I sure hope WEC doesn't operate this way.

Pat Patterson  
Austin, Texas

We don't. It's the difference between "mass distribution" and "quality distribution." All newstand periodicals and most paperback are mass distributed, and are destroyed rather than returned. With Book People and With Random House we have had quality distribution. All returns and over-runs we try to give to prisons, schools, and libraries.

P.S. Our printer Bob Parks says that paper suppliers are very quick to tell you you're buying recycled paper. If you want to be sure you had better personally check: their process. I haven't checked ours.

## ecotactics.

THE SEVEN C'S MOVEMENT FOR ECOLOGICAL ACTION

**Ecotactics**  
1970; 287 pp.

\$ .95 postpaid

from:  
Simon and Schuster, Inc.  
630 Fifth Avenue  
New York, New York 10020  
or WHOLE EARTH CATALOG

You must develop an investigative approach to the problems of pollution. It is one of the most basic prerequisites. Not only must it be a close analysis of contemporary environmental periodicals, annual reports, patents, correspondence, court records, regulations, technical papers, Congressional hearings and agency reports and transcripts, but there must be a search for the dissenting company, the conscience-stricken house lawyer, the concerned retiree or ex-employee, the knowledgeable worker and the fact-based supplier of the industry in company under study. They are there somewhere. They must be located.

Radner Nader

—SB

—SB

## Clear Creek

Out of Rolling Stone came Earth Times, which died. Out of Earth Times comes Clear Creek, which looks sturdy. Lively careful journalism with departments like Environmental Law, Earth Hero, Life Form of the Month. I'll bet this and Environment Monthly are the only eco-periodicals I keep up with when I quit being an editor.

Clear Creek  
Pennfield Jensen, ed.  
\$5/yr (monthly)  
\$8 Overseas & Mexico

from:  
Clear Creek  
617 Mission St.  
San Francisco, CA 94105



## The Environment Monthly

A terse publication with some of the solidest information we've seen on environmental issues, especially as they relate to architecture and land-use.

The Environment Monthly  
William Houseman, ed.  
\$35/yr (monthly) \$12.50 students

from:  
The Environment Monthly  
620 Lexington Ave.  
New York, N.Y. 10017

THE PEACE CORPS FINDS A NATURAL OUTLET FOR ITS ENERGIES. Flipping in purpose over the last couple of years, the Peace Corps has recently found new stimulus in the environmental sphere. Teaming up with the Smithsonian Institution, the Corps will encourage men and women of all ages experienced in the management of natural resources to sign up for constructive service in many countries that have already formed a waiting list. Among them: Philippines, Thailand, Micronesia, Costa Rica, Brazil, El Salvador and Colombia. For information write: Robert K. Poole, Director of Environmental Programs, Peace Corps Headquarters, Washington, D.C. 20535.

## Environment

A more professional journal of applied ecology. Dry but thorough articles.

Environment  
The Space  
Available

Environment  
\$8.50/yr. (monthly)

from:  
Committee for Environment Information  
438 North Skinker Boulevard  
Saint Louis, MO 63130

## ZPG National Reporter

I do believe that better publications are those that start quickly... gradually-carefully gathering resources and readers and substance until they are an organic force. This may be one.

## ZPG National Reporter

\$10/yr \$4 students

from:  
Zero Population Growth, Inc.  
Los Altos, CA 94022

Sperm Bank for men contemplating vasectomy who would like to have a reserve of their own semen should take after their existing plans. For information: Genetic Laboratories, Suite 700, Medical Arts Building, Minneapolis, Minn. 55402.

## ENVIRONMENTAL LAW



Turn off the lights; in the silence of your darkened home you can hear a thousand rivers whispering their thanks.

## Environmental Action

Parent and child of Earth Day, this publication is steadily growing less polite and more useful.

Environmental Action  
Sam Love, Jan Schaeffer, eds.  
\$7.50/yr (biweekly)

from:  
Environmental Action, Inc.  
Room 731  
1346 Connecticut Ave. N.W.  
Washington, D.C. 20036

Now that NTA is gone, the detergent industry appears to be moving in two directions. The large manufacturers, such as Procter and Gamble, Laver Brothers and Colgate-Palmolive, are returning to phosphate detergents. A growing number of smaller companies, on the other hand, are putting out "unique" new detergents which they claim do not have phosphates or NTA.

Mr. W. J. Witajnczyk, a chemist with Consumers Union, believes that nobody really knows what effects these new products will have on the environment. "Most of these products contain large quantities of washing soda or salt," Mr. Witajnczyk explained, "but they are coming out so fast that we don't have the staff or facilities to analyze them. There is no government mechanism designed to examine these products before they enter the environment." ... Until government or consumer pressure forces detergent manufacturers to conduct all their business in the best interests of the natural environment, rather than their own enrichment, washday miracles should be performed only by good old-fashioned soap.

Can this be sewage? Winter irrigation with the treated sewage effluent in this forested area produced a fairland of ice. Because effluent is produced year round, some special distribution techniques had to be developed for operating the system during sub-freezing temperatures. Several methods were tried including open trenches, perforated pipes, and revolving sprinklers. But the best performance was obtained using a stationary deflecting sprinkler-head developed specially for the project. Although the new sprinklers operated continuously under all conditions, the distribution pattern was not completely satisfactory, and research is continuing to try to improve them.

## Children in Small Families tend to be:

brighter  
bigger and taller  
more creative  
more mentally stable

## Parents of Small Families tend to be:

happier  
more emotionally stable  
better off financially

The best way to avoid any hint of genocide is to control the population of the dominant group. If this means an increase in the proportion of dark-skinned people in our society, so what? If blacks and whites cannot learn to enjoy their differences instead of using them as a base for hatred, there will not be a world worth living in.

Paul Ehrlich & Richard Harrison



eco-tage (4' x 10' 1/2" or 8' x 10' 1/2") n. [MnE, ecology and sabotage, from Gr. oikos, a house, and logo, to study; and sabotier, to damage machinery with wooden shoes], the branch of tactical biology that deals with the relationship between living organisms and their technology. It usually refers to tactics which can be executed without injury to life systems.



## BY THE RIVER

The rock Estelle was on was one of several boulders near the river, all of them gray and half as big as houses. It was already dark on the ground around the rock, and cold enough to make you want a sweater. But the sun was still shining in the trees overhead, and as D.R. climbed he thought: climbing for Estelle is climbing for the sun. It warmed him to think that. And he was warmed all over again when he saw Estelle lying on her bright Micmac seraps on the broad, flat surface of the rock.

Estelle had her shirt off, rolled under her head for a pillow. Her skin was naturally dark, a sort of pale olive that was always constant in its tone no matter how much or how little sun she got. Estelle's hips and her thighs were too thick for anyone ever to call her figure "beautiful" in that plastic sense that Miss America is considered "beautiful". And her face was too much the face of the average girl in a crowd for, say, a TV camera men to ever zoom in on and freeze as something special. And yet Estelle was a truly beautiful girl. She had dark hair and very large, dark brown eyes. Her breasts weren't especially big, or little, or round, or pointy or any of those magazine-writer tit-fetish clichés. They were just nice boobs on a nice woman, absolutely rail like everything else about her. Goddamn, D.R. thought. Tears came into his eyes. He could hardly believe the loveliness of the moment his painful walk across the campground had led him to. The sun was just going down behind the cliffs across the river, shining oranges through the trees and across Estelle's naked skin. Shading her eyes with her hand, she looked up and smiled at D.R., then patted the rock beside her with her hand. D.R. lay down and snuggled his face in her hair.

"I've been having the loveliest visions," said Estelle. "I've been seeing wonderful feathared horses, flying through the sky. And when fields that would turn to wings and fly away."

D.R. asked Estelle what she thought the visions meant. "Nothing," said Estelle. "At least I hope they don't mean anything. I like them just exactly as they were."

They lay quietly for awhile. The sky was full of light and still a brilliant blue. But the rock and the river valley and the cliffs on the other side were all in shadow now, and it was getting cool. Estelle turned on her side and snuggled close to D.R., laying her arm across him. Her breast tumbled precisely into D.R.'s hand, and for a time the reality between them was simply hand on breast, hand folded in the flesh of breast, pressing and rubbing and smoothing like petting down a pillow. Then their mouths came together in a long and dreamy kiss.



## What To Do? What To Do!

If you know someone who doesn't know yet that there is an environmental problem, give them this book for groundhog day.

-jd

## What To Do? What To Do!

Robinson Pollat Holmes  
1976, 80 or so pp.

\$2.00 postpaid

from:  
What To Do  
do Robinson  
Cadenza Farm  
Star Route #1  
Clatskanie, Ore. 97016

## Eco-action Lists

*What to Do!* (above) has a list of home and public deeds in good ecological conscience. Others, each with some original suggestions:

## If You Want to Save Your Environment

56 pp

\$0.75 postpaid

from:  
Environmental Handbook  
Station A, Box 11321  
Palo Alto, CA 94306

## What You Can do...

Malcolm Wells, 8 pp

\$0.10 postpaid

from:  
World Wildlife Fund  
910 17th St. N.W.  
Washington, D.C. 20006

## Do It Yourself Ecology

23 pp.

\$0.25 postpaid

from:  
Environmental Action  
Rm 731  
1346 Connecticut Ave. N.W.  
Washington, D.C. 20036

## Eco-tips 1 & 2

printed cards

\$0.10 postpaid (or \$5/100)

from:  
Concerns, Inc.  
2100 M St. N.W.  
Washington, D.C. 20037

## A Survey of Environmental Science Organizations in the USA

Comprehensive list of all the groups and publications now working.

-SB

## A Survey of Environmental Science Organizations in the USA

J. Y. Wang, Raymond Balter

1970; 59 pp.

\$5.50 postpaid

from:  
Ecology Center Press  
1360 Howard St.  
San Francisco, CA 94103

## Environmental Pollution

A highly technical publication with articles like "Experimental Secondary Methyl Mercury Poisoning in the Goshawk". British publication, international purview.

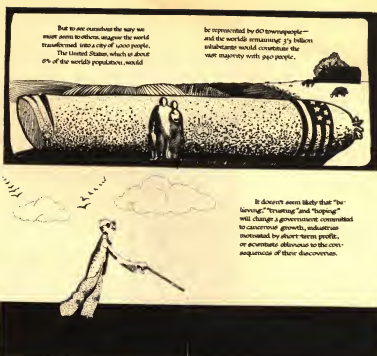
-SB

## Environmental Pollution

Kentucky, Mellaby, ed.

\$15.60 (yr quarterly)

from:  
Elsevier Publishing Co., Ltd.  
Ripple Rd.  
Barking, Essex  
England



**AIR POLLUTION: DISEASE AND PREMATURE DEATH**  
The level of Sulphur Dioxide in N.Y.C. on an annual average basis is over 3 times the level regarded as safe by federal and state authorities.

**Use an anti-pollution Gasmask**  
to protect your health

**BE PREPARED for fall and winter when Sulphur Dioxide levels double over summer. WEAR YOUR MASK when air index hits unhealthily. DON'T WAIT until the damage is irreparable.**

Send \$30 Check or M.O. for **SURVIVAL ASSOCIATES**  
332 E. 58 St. New York, N.Y. 10022  
(includes mask tube, postage of \$100 contribution to anti-pollution research and legislation)

*This mask is not the answer for air pollution but until we have better one prior to the answer it may be your answer.*

[Suggested by Judy Mikeka]

## NATURE CONSERVANCY

Charles H. W. Foster, President  
1522 K. Street, N.W.  
Washington, D.C. 20005  
(202) 223-4710

The Nature Conservancy is a member-governed organization created for non-profit educational and scientific purposes. Projects are conducted to preserve outstanding natural areas of the U.S. The main thrust is focused upon developing public awareness of natural area problems, fostering regional and community planning for preserving parks and open spaces, and advising and supporting local groups in actual projects. The Conservancy's goal is to direct the growth of our civilization so that we may live more nearly in harmony with our environment.

-SB

## Environmental Pollution

Kentucky, Mellaby, ed.

\$15.60 (yr quarterly)

from:  
Elsevier Publishing Co., Ltd.  
Ripple Rd.  
Barking, Essex  
England

**42** More Ecology  
Whole Systems

Fig. 2. Distribution of important sources of mercury contamination of water in Canada's eastern provinces.

## Food from Waste

An inkling of the broad vision and planning needed comes from a sleepy little Mississippi town called Bay St. Louis. There, a National Aeronautics and Space Administration facility was scheduled to be phased out. But government officials and Louisiana State University (Baton Rouge 70803) representatives worked out a plan to use the buildings, scientists, and a fraction of the usual budget for a fantastic new idea of food production. Using a bacteria strain discovered in a sugar cane field by an LSU associate professor of microbiology, the scientists attempted to convert cellulose waste products—corn cobs, grass, leaves, sugar cane residue, and even logs—into high protein food.

They succeeded. In contrast to a 1,100-lb grazing cow, which produces about 1 lb of protein a day, 1,100 lb (much more than they now have working) of their busy microbes could turn waste products into 12,000 lb of protein each day—and do it without adding to the environment's burden of pesticides and nitrogenous fertilizers.

"The stuff doesn't taste bad at all—something like egg yolk with a little salt in it," says Dr. Clayton D. Callihan, LSU associate professor of chemical engineering and director of the project. It analyzes down to 50% protein, and the rest cellulose, carbohydrates, and fat.

Dr. Callihan is jubilant: "I know we already have some good cattle feed. If we ever get FDA approval, we could have human food. And we've found we can convert old books, rags, newspapers, and magazines, too."

[Item from unknown magazine sent to us by Phil Lusk in California]

## Ecology Access

Ecology Forum, Inc.  
Suite 303 East, 200 Park Avenue  
New York, N.Y. 10017

ACCESS is an indexing, abstracting and information retrieval service that covers published and non-published information on environmental pollution, conservation and related fields. ACCESS provides subscribers with an overview of the environmental reporting of more than 400 scholarly, scientific, industrial, technical and general periodicals and major newspapers; important environmental radio and television programming, films and filmstrips, books, corporate publications and major conference publications.

ACCESS is made available to subscribers in four steps:

1. Indexing and abstracting services, published bi-weekly (26 times per year) ensure timely coverage of important information; abstracts summarize contents, and describe type of information provided.
2. Information Retrieval Services allow subscribers to order copies of needed items, in hard copy or microfilm.
3. Semi-annual cumulative indexes, provide cross-referenced coverage of past ACCESS information.
4. On-call research services assist subscribers in locating special items, assembling data or bibliography, obtaining literature surveys, summaries or other research.

ACCESS can be used to monitor:

- general developments affecting the environment.
- horizontal environmental categories such as water pollution chemical and biological contamination, solid waste disposal, or water pollution.
- specific aspects of horizontal categories such as estrophication, compaction, or metal poisoning.
- coverage of timely environmental issues such as mercury pollution, SST, DDT, hard copy or microfilm, Trans-Alaska pipeline, or Trans-Alaska barge canal.
- vertical industrial categories such as Agricultural chemicals, paper industry, utilities.

ACCESS can be used as a starting point for literature searches and as a reference tool for articles, congressional hearings, position papers, research reports, speeches, state of the art papers or theses; as a tool to keep abreast with professional readings; to alert reporters, press or subordinates to important environmental information or developments; or to obtain advance notice about environmental books, radio and TV programs and films. Certain items can be ordered directly through ACCESS.

## How to be a Survivor

Let the population issue become the property of the Establishment, who would probably blow it, this book by Ehrlich and Harriman establishes the radically-based theory and practice it must take to evade the ultimate population crunch.

### How to be a Survivor

Paul Ehrlich, Richard Harriman  
1971; 207 pp.

\$1.25 postpaid

from:  
Ballantine Books, Inc.  
101 York Ave.  
New York, N.Y. 10003  
or WHOLE EARTH CATALOG

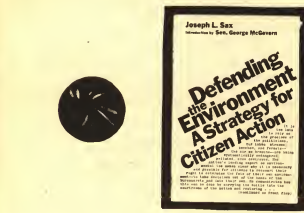
No matter how you slice it, the resources of the planet are finite, and many of them are non-renewable. Each giant molecule of petroleum is lost forever when we tear it asunder by burning to release the energy of sunlight stored in it millions of years ago. Concentrations of mineral wealth are being dispersed beyond recall, senselessly scattered far and wide to where we cannot afford the energy to reconcentrate them. Precious stores of fresh ground water, accumulated over millennia, are being drained much more rapidly than natural processes can replenish them.

A less discriminatory and therefore potentially more effective program might be simply to cut the income tax in half for each woman for each year she did not reproduce, with a similar tax break going to guardians of girls who do not pay taxes. Since most of the poor have little or no income tax liability, the system would discriminate against the prime villains: the middle class. The effect on the rich, however, would probably be negligible, since the present tax structure is largely a swindle perpetrated by the rich at the expense of the middle class and poor. Replacement of our regressive income tax system with a truly progressive one would help in this area as well as in many others.

Europeans live a pleasant, reasonably affluent life on somewhat less than one-half the per capita electric power consumption of Americans, and with careful planning their level of consumption could also be greatly reduced. Amazingly, though, the American power industry wants to increase our per capita consumption at a rate that will double our national use of power every decade.

## Defending the Environment

Even more direct than boycotting the bastards is suing the bastards or toughening the laws they must abide by or just enforcing the laws they're presently ignoring. Citizen action. *So shows why and how.*



### Defending the Environment

Joseph L. Sax  
1971; 255 pp.

\$6.95 postpaid

from:  
Alfred A. Knopf, Inc.  
201 E. 50th St.  
New York, N.Y. 10022

or WHOLE EARTH CATALOG

This book deals principally with preventive injunctions, designed to stop environmentally dangerous projects before they get underway.

Lawsuits seeking money damages for the public, by and large, are of secondary importance in environmental controversies. Most of the interests sought to be protected could not be easily compensated in damages in any event. Clean air and water for public use, scenic vistas, and the maintenance of fisheries and recreation areas, even where demonstrably harmed, rarely matter in significant dollar amounts to any particular individual citizen. The effects of environmental conditions are diffuse both in space and time, and rarely will a damage suit achieve the results sought. This is not to assert that such suits should be banned—only that they are not appropriate at the cutting edge of the movement for environmental quality. The prospect of damage suits may have some deterrent effect, but they tend to drag on interminably, with little result.

There is no good reason why we should hesitate to adopt a theory of public rights to environmental quality, enforceable at law, nor is there any reason to think we cannot adjudicate the reasonable accommodations needed to protect against unnecessary threats to the environment.



## THREE LAWS

EVERYTHING IS CONNECTED TO EVERYTHING  
EVERYTHING'S GOT TO GO SOMEWHERE  
THERE'S NO SUCH THING AS A FREE LUNCH

## Shake hands with tomorrow



*Minamata Disease—a neuro-muscular condition invertebrate to organic mercury in freshwater fish.*

## or fight pollution today.

MANNENSHA INTERNATIONAL INC. ad, reprinted in  
*Environmental Action*.

## Four good organizations Four good newsletters

### Clear Creek reminded us:

Sierra Club  
Sierra Club Bulletin \$15/yr  
Mills Tower  
San Francisco, CA 94104  
Friends of the Earth  
Not Men Apart \$15/yr, \$7.50 students  
30 East 42nd St.  
New York, N.Y. 10017  
Wilderness Society  
Wilderness Society Bulletin \$7.50/yr, \$4 students  
729 15th St. N.W.  
Washington, D.C. 20005  
Environmental Defense Fund  
Newsletter \$10/yr, \$5 students  
1910 N. St. N.W.  
Washington, D.C. 20036

The Environmental Defense Fund, a group of scientists and lawyers attacking a broad range of environmental problems by incorporating science into new law and pushing for the enforcement of ecologically sound but politically unattractive existing legislation. I think a lot of Catalogue readers would like EDF. Its life style is not as funky as some ecology action groups, but it has been extremely effective in its short lifetime. EDF also has a newsletter which unspins legal and bureaucratic webs as exotic as nature herself. In that sense, affiliation with EDF is a dynamic emblem with some of the most pervasive and influential forms of our civilization.

John Woodcock  
Bloomington, Indiana

Environmental lawyers might be interested in the *Environmental Law Reporter*, \$50/yr (monthly), from: The Environmental Law Institute, Dupont Circle Bldg., Suite 620, 1346 Connecticut Ave N.W., Washington, D.C. 20036. The first issue was 280 pp., organized into Summary and Comments, Litigation, Statutory & Administrative Materials, Administrative Proceedings, Articles & Notes, and Bibliography & Facsimile Service.

[Suggested by Gordon Andrews]

## Know Your Local Polluters

and boycott the bastards. "The garbage produced by an industry is the responsibility of that industry." (Ehrlich). Individual buyers have far more control over economic behavior than voters. Regardless of how you feel about the profit motive (it is fine), most of the polluters are bound by it, except government ones. If you hurt their sales because they hurt your air or water, then they or their competitors will do anything to get your business back. High-mindedness doesn't have to enter into it, just choice for value.

However, beware of false labeling. Ecology is fashionable, and there's a lot of pretense going on, especially in the ads. This is where the ecology organizations can be invaluable. They are best equipped to determine who the real polluters are (and who are making real efforts to clean up their cycles), and they're about it from the start.

A compendious list of ecology [etc.] organizations has been compiled by Ecology Center and Planned Parenthood:

Grass Roots  
Feb. 1970; 50¢ pp.

\$1.50 postpaid

from:  
Ecology Center  
2179 Alston Way  
Berkeley, CA 94704

or Planned Parenthood  
482 West MacArthur Blvd.  
Oakland, CA 94609

## Consumer Alliance

Consumer Alliance will represent the combined purchasing power of several million customers organized on a nationwide basis to demand the right to have safe, functional, durable, and recyclable products which have been manufactured in an ecologically sound manner.

The address for free copies of the Declaration of Consumer Rights, membership applications and information is: Consumer Alliance, P.O. Box 11773, Palo Alto, California 94306. Annual membership is \$5.00; junior memberships are available. Consumer Alliance is tax-exempt and tax-deductible.

Richard Harriman



## FALLING

Estelle and D.R. hadn't had many times like this one lately. They'd fucked a time or two coming down through California, but it seemed like there just wasn't enough leisure on this trip for any real love-making. Exhaustion was the theme so far. Exhaustion had been catching up to them for a long time now. In a way their whole experience together since Altamont had been a steady descent into exhaustion; a drop that gained momentum as they went along, like falling. When D.R. felt particularly tired, and dirty, and looked up in his mind, it was like he was the one who was falling, with Estelle being dragged along behind. That wasn't accurate, of course. That was just stuff in D.R.'s head, a product of the same weary fear that produced the sense of falling in the first place. There was a way in which Estelle had already fallen further than D.R. had, already knew stuff that he had yet to learn. In a way, she was coming up as he went down, and reaching out a hand to save him from what she already knew. The thing that overvalued D.R. when he thought about it that way was how utterly genuine that was of her, and how dangerous for her. Danger was everywhere, it seemed, and in more guises than he could account for. Sometimes D.R. felt like he had some kind of disease that Estelle was sure to catch if she stayed with him long enough. As a matter of fact, he'd given her the clap the very first week they were together. As a man who dealt heavily in signs and omens, he had seen that as a forewarning, a metaphor of other and worse things yet to come. It hadn't bothered him all that much at the time. In the beginning, Estelle had been just another cunt by the roadside as likely to give to him as he was the other way around. But that was a couple of months ago, or three, or four, or whatever. He wasn't sure any more just how long ago it had been. His sense miles and micrograms, and even then he was still a person. But however long ago it had been since he'd first found Estelle, it was still a person he had depended on to depend on her so much that it, and the fact that she depended just as much or more, on him only made it that much worse.

But it wasn't a thing that he could choose by now. It was like there was a power over his life that wasn't his to wield, a power so large and mysterious eld he'd said it was his, a power so wild to yield, now there's a nice play on words for you. I'll have to work on that. Wild and yield. Shield and deluded. "I've just written a poem," said D.R. "Tell it to me," said Estelle. "Wild and yield and shield and deluded." Estelle laughed and rolled onto her back so she could take her

pull D.R. started undressing too. When they were naked Estelle pulled D.R. on top of her, and for almost an hour they made love.



# CHANGES 4 CHANGES



Drawing of Evolution Valley by Judy Daniel  
for '4 Changes' poster by Noel Young.

## CHŌFŪ

### I. POPULATION

#### THE CONDITION

**Position:** Man is but a part of the fabric of life—dependent on the whole fabric for his very existence. As the most highly developed tool-using animal, he must recognize that the unknown evolutionary destinies of other life forms are to be respected, and act as gentle steward of the earth's community of being.

**Situation:** There are now too many human beings, and the problem is growing rapidly worse. It is potentially disastrous not only for the human race but for most other life forms.

**Goal:** The goal would be half of the present world population, or less.

#### ACTION

**Social/political:** First, a massive effort to convince the governments and leaders of the world that the problem is severe. And that all talk about raising food production—well intentioned as it is—simply puts off the only real solution: reduce population. Demand immediate participation by all countries in programs to legalize abortion, encourage vasectomy and sterilization (provided by free clinics)—free insertion of intrauterine loops—try to correct traditional cultural attitudes that tend to force women into child-bearing—remove income tax deductions for more than two children above a specified income level, and scale it so that lower income families are forced to be careful too—or pay families to limit their number. Take vigorous stand against the policy of the right-wing in the Catholic hierarchy and any other institutions that exerce an irresponsible social force in regard to this question; oppose or correct simple-minded boosterism that equates population growth with continuing prosperity. Work ceaselessly to have all political questions be seen in the light of this prime problem.

**The community:** Explore other social structures and marriage forms, such as group marriage and polyandrous marriage, which provide family life but may produce less children. Share the pleasures of raising children widely, so that all need not directly reproduce to enter into this basic human experience. We must hope that no woman would give birth to more than one child, during this period of crisis. Adopt children. Let reverence for life and reverence for the feminine mean also a reverence for other species, and future human lives, most of which are threatened.

**Our own heads:** "I am a child of all life, and all living beings are my brothers and sisters, my children and grandchildren. And there is a child within me waiting to be brought to birth, the baby of a new and wiser self." Love, loving, a man and woman together, seen as the vehicle of mutual realization, where the creation of new

oneselves and a new world of being is as important as reproducing our kind.

### II. POLLUTION

#### THE CONDITION

**Position:** Pollution is of two types. One sort results from an excess of some fairly ordinary substance—smoke, or solid waste—which cannot be absorbed or transmitted rapidly enough to offset its introduction into the environment, thus causing changes the great cycle is not prepared for. (All organisms have wastes and by-products, and these are indeed part of the total biosphere: energy is passed along the line and refracted in various ways, "the rainbow body." This is cycling, not pollution.) The other sort is powerful modern chemicals and poisons, products of recent technology, which the biosphere is totally unprepared for. Such is DDT and similar chlorinated hydrocarbons—nuclear testing fall out and nuclear waste—poison gas, germ and virus storage and leakage by the military; and chemicals which are put into food, whose long-range effects on human beings have not been properly tested.

**Situation:** The human race in the last century has allowed its production and scattering of wastes, by-products, and various chemicals to become excessive. Pollution is directly harming life on the planet: which is to say, ruining the environment for humanity itself. We are fouling our air and water, and living in noise and filth that no "animal" would tolerate, while advertising and politicians try and tell us we've never had it so good. The dependence of the modern governments on this kind of untruth leads to shameful mind-pollution: mass media and most school education.

**Goal:** Clean air, clean clear-running rivers, the presence of Pelican and Oprey and Gray Whale in our lives; salmon and trout in our streams; unclouded language and good dreams.

#### ACTION

**Social/political:** Effective international legislation banning DDT and related poisons—with no fooling around. The collusion of certain scientists with the pesticide industry and agri-business in trying to block this legislation must be brought out in the open. Strong penalties for water and air pollution by industries—"Pollution is somebody's profit." Phase out the internal combustion engine and fossil fuel use in general—more research into non-polluting energy sources; solar energy; the tides. No more kidding the public about atomic waste disposal: it's impossible to do it safely, and nuclear-power generated electricity cannot be seriously planned for as it stands now. Stop all germ and chemical warfare research and experimentation; work toward a hopefully safe disposal of the present staggering and stupid stockpiles of H-Bombs, cobalt gun, germ and poison tanks and cans. Laws and sanctions against waste-full use of paper etc. which adds to the solid waste of cities—develop methods of re-cycling solid urban wastes.

Re-cycling should be the basic principle behind all waste-disposal thinking. Thus, all bottles should be re-usable; old cans should make more cans; old newspapers back into newsprint again. Stronger controls and research on chemicals in foods. A shift toward a more varied and sensitive type of agriculture (more small-scale and subsistence farming) would eliminate much of the call for blanket use of pesticides.

**The community:** DDT and such: don't use them. Air pollution: use less cars. Cars pollute the air, and one or two people riding along in a huge car is an insult to intelligence and the Earth. Share rides, legalize hitch-hiking, and build hitch-hiker waiting stations along the highways. Also—a step toward the new world—walk more; look for the best routes through beautiful countryside for long-distance walking trips: San Francisco to Los Angeles down the Coast Range, for example. Learn how to use your own manure as fertilizer if you're in the country—as the Far East has done for centuries. There's a way, and it's safe. Solid waste: boycott bulky wasteful Sunday papers which use up trees. It's all just advertising anyway, which is artificially inducing more industry consumption. Refuse paper bags at the store. Organize Park and Street clean-up festivals. Don't work in any way for or with an industry which pollutes, and don't be drafted into the military. Don't waste. (A monk and an old master were once walking in the mountains. They noticed a little hut upstream. The monk said, "A wise hermit must live there"—the master said, "That's no wise hermit, you see that lettuce leaf floating down the stream, he's a Waster." Just then an old man came running down the hill with his beard flying and caught the floating lettuce leaf.) Carry your own jug to the winery and have it filled from the barrel.

**Our own heads:** Part of the trouble with talking about DDT is that the use of it is not just a practical device, it's almost an establishment religion. There is something in Western culture that wants to totally wipe out creepy-crawlies, and feels repugnance for toadstools and snakes. This is fear of one's own deepest natural inner-self wilderness areas, and the answer is, relax. Relax around bugs, snakes, and your own hairy dreams. Again, farmers can and should share their crops with a certain percentage of bug life as "paying their dues." Thoreau says: "How then can the harvest fail? Shall I not rejoice also at the abundance of the weeds whose seeds are the granary of the birds? It matters little comparatively whether the fields fill the farmer's barns. The true husbandman will cease from anxiety, as the squirrels manifest no concern whether the woods will bear chestnuts this year or not, and finish his labor with every day, relinquish all claim to the products of his fields, and sacrificing in his mind not only his first but his last fruits also." In the realm of thought, inner experience, consciousness, as in the outward realm of interconnection, there is a difference between balanced cycle, and the excess which cannot be handled. When the balance is right, the mind

recycles from highest illuminations to the stillness of dreamless sleep; the alchemical "transmutation."

### III. CONSUMPTION

#### THE CONDITION

**Position:** Everything that lives eats food, and is food in turn. This complicated animal, man, rests on a vast and delicate pyramid of energy transformations. To grossly use more than you need, to destroy, is biologically unsound. Most of the production and consumption of modern societies is not necessary or conducive to spiritual and cultural growth, let alone survival; and is behind much greed and envy, age-old causes of social and international discord.

**Situation:** Man's careless use of "resources" and his total dependence on certain substances such as fossil fuels (which are being exhausted, slowly but certainly) are having harmful effects on all the other members of the life-network. The complexity of modern technology renders whole populations vulnerable to the deadly consequences of the loss of any one key resource. Instead of independence we have over-dependence on life-giving substances such as water, which we squander. Many species of animals and birds have become extinct in the service of fashion-fuels—oil or fertilizer—or industrial oil—the soil is being washed; in fact mankind has become a locust-like blight on the planet that will leave a bare cupboard for its own children—all the while in a kind of Addict's Dream of affluence, comfort, external progress, and the great achievements of science to produce software and steel.

**Goal:** Balance, harmony, humility, growth which is a mutual growth with Redwood and Aqual (would you want your child to grow up without ever hearing a wild bird?)—to be a good member of the great community of living creatures. True affluence is not needing anything.

#### ACTION

**Social/political:** It must be demonstrated ceaselessly that a continually "growing economy" is no longer healthy, but a Cancer. And that the criminal waste which is allowed in the name of competition—especially that ultimate in wasteful needless competition, hot wars and cold wars with "communism" (or "capitalism")—must be halted totally with ferocious energy and decision. Economics must be seen as a small sub-brand of Ecology, and production/distribution/consumption handled by companies or unions with the same elegance and sparseness one sees in nature. Soil banks, water space, phase out logging in most areas. "Lightweight dome and honeycomb construction" to fit with the architectural principles of nature. "We shouldn't use wood for housing because trees are too important." Protection for all predators and varmints: "Support your rights and defend the international Whaling Commission which is selling out the last of our whales, wise whales! Absolutely no further development of roads and concessions in National Parks and Wilderness Areas; build auto campgrounds in the least desirable areas. Plan commercial and legal boundaries to sacred lands and necessary products. Radical Co-op. Politically, blast both "Communist" and "Capitalist" myths of progress, and all crude notions of conquering or controlling nature.

**The community:** Sharing and creating. The inherent aptness of communal life—where large trees are owned jointly and used efficiently. The power of renunciation: if enough Americans refused to buy a new car for one given year it would permanently alter the American economy. Recycling clothes and equipment. Support handicrafts, gardening, home skills, midwifery, herbs—all the things that can make us independent, beautiful and

whole. Learn to break the habit of unnecessary possessions—a monkey on everybody's back—by avoiding a self-abetting anti-jovous self-righteousness. Simplicity is light, carefree, neat and loving—not a self-imposed ascetic trip. (The Great Chinese poet Tu Fu said "The ideas of a poet should be noble and simple.") I don't shoot a deer if you don't know how to use the hide and preserve that which you can't eat, to tan the hide and use the leather—to use it all, with gratitude, right down to the sinew and hooves. Simplicity and mindfulness in diet is a starting point for many people.

**Our own heads:** It is hard to even begin to gauge how much a complication of notions, the notions of "any and every," stand between us and a true, clear, liberating way of seeing the world. To live lightly on the earth, to be aware and alive, to be free of egoism, to be in contact with plants and animals, starts with simple concrete acts. The inner principle is the insight that we are interdependent energy fields of great potential wisdom and compassion—expressed in each person as a superb mind, a handsome and complex body, and the almost magical capacity of language. To these potentials and capacities, "owning things" can add nothing of authenticity. "Clad in the sky, with the earth for a pillow."

### IV. TRANSFORMATION

#### THE CONDITION

**Position:** Everyone is the result of four forces: the conditions of this known-universe (matter/energy forms and energies change); the biology of his species; his individual genetic heritage and the culture he's born into. Within this web of forces there are certain spaces and loops which allow total freedom and illumination. The gradual exploration of some of these spaces is "evolution" and, for human cultures, what "history" could be. We have it within our deepest powers not only to change our "selves" but to change our culture. If man is to remain on earth he must transform the five-millennia-long urbanizing civilization tradition into a scientific/spiritual culture. "Wildness is the state of complete awareness. That's why we need it."

**Situation:** Civilization, which has made us so successful a species, has overshot its nose and now threatens us with its inertia. There is some evidence that civilized life isn't good for human gene pool. To achieve the Changes we must change the very foundations of our society and our minds.

**Goal:** Nothing short of total transformation will do much good. What we envision is a planet on which the human population lives harmoniously and dynamically by employing a sophisticated and unobtrusive technology in a world environment which is "left natural." Specific points in this

- A healthy and spare population of all races, much less in number than today.
- Cultural and individual pluralism, unified by a type of world tribal council. Division by natural and cultural boundaries rather than arbitrary political boundaries.
- A technology of communication, education, and quiet transportation, land-use being sensitive to the properties of each region. Allowing, thus, the Bison to return to culture in the great alluvial valleys; deserts left wild for those who would trot in them. Computer technicians who run the plant part of the year and walk along with the Elk in their migrations during the rest.
- A bare culture, free of all social organization that inhibits power and property seeking. Little encouraging exploration and challenge in things like music, meditation, mathematics, mountaineering, magic, and all other ways of authentic being-in-the-world. Women

totally free and equal. A new kind of family—responsive, but more festive and relaxed—is implicit.

#### ACTION

**Social/political:** It seems evident that there are throughout the world certain social and religious forces which have worked enough history toward an ecologically and culturally enlightened state of affairs. These forces are encouraged: Gnostics, hip Marxists, Teilhard de Chardin Catholics, Druids, Taoists, Biologists, Witches, Yogis, Bhikkus, Quakers, Sufis, Tibetans, Zens, Shamans, Bushmen, American Indians, Potlatchers, Anarchists, Alchemists... The list is long. All primitive cultures, all communal and ashram movements. Since it doesn't seem practical or even desirable to think that direct bloody force will achieve much, it would be best to consider this a continuing "revolution" of conscious action. We will not own guns but by seeing the key images, myths, archetypes, eschatologies, and ecstasies so that life won't seem worth living unless one's on the transforming energy's side. By taking over science and technology" and releasing its real possibilities and powers to the service of this planet—which, after all, produced us and it.

**The community:** New schools, new classes, walking in the woods and cleaning up the streets. Find psychological techniques for creating an awareness of "self" which includes the social and natural environment. "Consideration of what specific language forms—symbolic systems—and social institutions constitute obstacles to ecological awareness." Without falling into a facile interpretation of McLuhan, we can hope to use the media. Let no one be ignorant of the facts of biology and related disciplines; bring up our children as part of the wild. Some communities can establish themselves in back-water rural areas and flourish—others maintain themselves in urban centers, and the two types work together—a two-way flow of experience, people, money and home-grown vegetables. Ultimately cities will exist only as joyous tribal gatherings and fairs, to dissolve after a few weeks. Investigating new life-styles is our work, as is the exploration of Ways to explore our inner realms—with the known bounds of crashing that we will have. We would work with political-minded people where it helps, hope to change their vision, and with people of all varieties of politics or thought at whatever point they become aware of environment issues. Master the archaic and the primitive as models of basic needs and related cultures, as well as the most imaginative extensions of science—and build a community where these two vectors cross.

**Our own heads:** In which it starts. Knowing that we are the first human beings in history to have all of man's culture and previous experience available to our study, and being free of the old ideas of spiritual cultures to seek out a larger identity. "The first members of a civilization since the early Neolithic to wish to look clearly into the eyes of the wild and see our self-hood, our family, there. We have these advantages to set off the obvious disadvantages of being as we are. We have what gives us a fair chance to penetrate some of the riddles of ourselves and the universe, and to go beyond the idea of "man's survival" or "the survival of the biosphere" and to draw our strength from the realization that at the heart of things is some kind of serene and ecstatic joy that is not only beyond qualities and certainly beyond birth-and-death. "No need to survive!" "In the fires that destroy the universe at the end of the kalpa, what survives?"—"The iron tree blooms in the void."

Knowing that nothing need be done, is where we begin to move from.

### THE HUMANITY OF THE LONE OUTDOORSMAN

There were at least three things the Lone Outdoorsman could have done in response to the filthy crime he saw happen on the big rock by the river. He could have shot big holes in the young couple's ears and legs and handed back with his .357 magnum pistol. Or he could have gone to his camper, got his rubber life raft out of his fourteen foot aluminum motorboat, launched it in a mile and stepped an amphibious assault upon the little beach near the rocks and captured them before they knew what was happening. Or—...and admittedly this is a big or; it's big because, as it turns out, the Lone Outdoorsman is far from your ordinary, everyday one-dimensional hunter. The thing that makes the Lone Outdoorsman a refreshing mental complexity of a kind you don't ordinarily run into in folktales. All mixed in with his very mental images of bullet-riddled bodies and heroic assaults upon beechhides was a commendable impulse to be nice to these kids, to befriend them and hopefully influence them in some concrete ways, assault them in the heart and take them to the river, or else be a good neighbor and invite Divine Right and Estelle over to his place for supper.

And so when D.R. and Estelle had finished bailing, had dressed and folded the serape and walked back through the darkening campground to their own scene, they found the Lone Outdoorsman leaning against Yr's front, waiting for them.



#### THE INVITATION

"Well," he said, "how are you young folks this evening. Feeling all right? What I thought was the two of you might like to come over and supper with me, I mean to tell you you all have been traveling pretty hard, and maybe not eating too well, and since I've got these steaks, yes, four of the juiciest steaks you've ever had in your company, you know I've got a niece and a nephew about your age, my brother's kids, the wife and me, we had a kid but he died, but my brother's kids, now, I tell you, they're all right. They come out from Little Rock about once a year, and we appreciate seeing 'em, I declare we do. You know, a lot of the older folks now, they ain't got much sense in young people these days, they object to the way they behave. And I guess in some things I do too. But my grandfather was a big influence on me, and what he believed in was giving people a second chance. I take after Granddaddy in that respect. I guess when it comes to being with people and judging 'em, I'm what you'd call a liberal. For I ain't a lot of good in young people nowadays, I declare I do. Why ain't, all the young people need to be out in the hills

and romp around some. I grew up on the land and I know how good it is for you. Why when I was a kid I could hunt and track, why I'd go out by myself for days at a time when I was ten and twelve years old. I know that, there just wasn't anything grander than getting off to myself in the hills with my gun. I've always said I was born a hundred years too late. I ought to of been a pioneer. The wife, she ain't like to get too much, so two or three times a year I just cut loose and go out and live out in nature a few days. As my granddaddy would say, nature's good for you, she ain't that what you all say?"

Estelle murmured that she was all right too. Divine Right said something and the Lone Outdoorsman said something else. But five minutes later they didn't have the faintest idea how the conversation had ended. The Lone Outdoorsman was everything else out of their head except the fact that the horrendous joint D.R. rolled, in celebration of the crowd who had the conversation had ended. The Lone Outdoorsman smoke dope and hug and kiss all at the same time. D.R. and Estelle were ecstatic. Every kink in them had been ironed out by their wonderful hour on the rock. And now here they were, getting all dressed up to go to supper to get a free steak with their neighbor. Steak! Goddamn. It would be a real treat. Well since they'd left the Anaheim Hills home in California. When they had their outfits on, Estelle's hair ankle-length gleamed down and D.R. in his plaid outfit of leather pants and shirt and coonskin cap with tail, they paused long enough to hold each other tightly for a moment. Then D.R. took the lead and they walked to the point at the neck of the river to the evening, then set out with their lady to call on the Lone Outdoorsman.



# Land Use

## An Agricultural Testament

The first "organic gardener" I ever ran into was a man who ended all his sentences "thus saith the Lord." The Lord, it turned out, had been in the habit of speaking in a very conversational manner to his farm folk and to his family and to his neighbors. He was a gardener—among other things, a recipe for fertilizer. I noticed that the Lord's side of the conversation tended to be most flattering to my new acquaintances and most decidedly threatening to all the neighbors—a gang of villains, who were going to die of cancer because of such sin as fasting to the wrong prophets, and cooking with aluminum pots.

Now I would be the last to deny the possibility that a man might receive the word from on high and speak beyond the usual powers of his mind. But I am exceedingly mistrustful of such claims, especially on divine revelation to show him what is obvious about the ground under his feet. This man deservedly belongs in "the lunatic fringe" of a discipline that demands respect and attention to the land, and it is far out or esoteric or mystical, but because it makes good sense.

The principles of organic agriculture are not derived from mystical insight or revelation, but are based upon observation. They have been established in our part of the world in our time by men who were excellent observers, and who were moreover accomplished and respectable scientists. The scientific respectability of organic methods has been obscured for us both by those who have insisted upon making a cult of the obvious and by the affluence and glamor of the technological agriculture—the agriculture of chemicals and corporations.

The pioneer book of organic agriculture in modern times is King's *Farmers of Forty Centuries*, which proposed no innovation, but only provided new access to the ancient tradition of organic practice in the Orient. King was no cultist or food faddist. He was a professor of agriculture, eminently practical and an observant man, well enough trained that he fully understood what he saw, in terms of the history and culture of Asia, and in terms of his potential usefulness to the West. King's is one of the most important books I have ever read. If it is allowed to remain out of print I believe that will be a tragedy and a great loss, for it can provide indispensable insights into the causes and the possible remedies of our environmental crisis.

King's most famous reader and follower was probably Sir Albert Howard, who in thirty years of research and experimentation established scientifically the soundness of the ancient methods. Howard's *An Agricultural Testament* is another extremely important book. It is based upon the premise that good agricultural practice is based upon the observation and the use of natural processes. King's book, Howard thought, demonstrated that an agriculture based upon natural processes could thrive for an unlimited time, whereas an agriculture that contradicts or ignores natural processes can only exhaust the land, and in its failure assure the failure of the society.

Howard's thinking proceeds from one cardinal fact: "The forest matures itself." He later elaborates this observation in an agricultural metaphor.

The main characteristic of Nature's farming can therefore be summed up in a few words. Mother earth never attempts to fix anything. She always raises mixed crops; great pains are taken to preserve the soil and to prevent erosion; the mixed vegetable and animal wastes are converted into food; there is no waste; the processes of growth and the processes of decay balance one another; ample provision is made to maintain large reserves of fertility; the greatest care is taken to store the rainfall; both plants and animals are left to protect themselves against disease.

And so the task Howard set himself was first to understand those processes and interrelationships by which the natural world sustains and renews itself, and then to work out methods by which people could use the land in cooperation with nature. He realized—and I think it is hard to overstate the importance of this—that the specialized analytical approach of "scientific" agriculture was creating more problems than it solved.

Instead of breaking up the subject into fragments and studying agriculture in piecemeal fashion by the analytical methods of science, appropriate only to the discovery of new facts, we must adopt a synthetic approach and look at the wheel of life as one great subject and not as if it were a patchwork of unrelated things.

He insisted that quality was a more important evaluative standard than quantity. He saw that the soil was more a process than a substance, that its life was more important than its analyzable contents, that its health was not a matter of inert proportions but a balance of live forces, and that therefore "the correct relation between the processes of growth and the processes of decay is the first principle of successful farming."

Howard's discoveries and methods and their implications are given in detail in *An Agricultural Testament*. They are of enormous usefulness to gardeners and farmers, and to anyone else who may be interested in the history and the problems of land use. But because of its practical worth, Howard's book is valuable for his ability to place his facts and insights within the perspectives of history. This book is a critique of civilizations, judging them not by their artifacts and victories but by their response to "the sacred duty of handing over unimpaired to the next generation the heritage of a fertile soil."

A matter of considerable interest to me is that, written within the context of more knowledge and from the perspective of a more urgent time, *An Agricultural Testament* can be read as a confirmation and elaboration of Jefferson's belief in the supreme importance of the small farmer—the man devoted in final terms to his own piece of his homeland, who makes of the life of the land a human way of life.

[Suggested and reviewed by Wendell Berry.]

An Agricultural Testament  
Sir Albert Howard

1940, 253 pp.  
\$4.00 postpaid from:  
Oxford University Press  
1600 Politt Drive  
Fair Lawn, N.J. 07410

or WHOLE EARTH CATALOG

## Farmers of Forty Centuries

I have come more and more strongly to believe that the ultimate moral goal, even the moral necessity, of the American people must be to become the aborigines of the American land. An aborigine, my dictionary says, is "an indigenous inhabitant...as contrasted with an invading or colonizing people." An indigenous people is one "living naturally in a particular region or environment." In general, aborigines are preservers of their land, whereas invaders or colonizers are the exploiters and destroyers of theirs. White Americans have for the most part remained the invaders and colonizers of the American continent; their relationship to the land has remained economic, exploitive, superficial, destructive. American history is to a fearful extent the history of a group of mercenary nomads, exhausting the land as they have moved westward.

A great mistake has been to assume that people could become American in any sense that would be meaningful and ennobling by means of the sused-up emotions of public patriotism, nationalism. The fact is that meaningful native Americans have would have to involve a complexly reverent and knowing and reverent attitude toward the land; it would manifest itself not only in public fervor but in private behavior; and it would be based on methods of land use. No matter how "sophisticated" and urban our society becomes, our basic relation to the land will continue to be agricultural. And if we are ever to have a decent relation to our land, we will probably have to begin by converting from agricultural methods that are exploitive and wasteful to methods that are preserving. For this we will need more than the scientific expertise that we have relied on so far; we will need morals.

A great deal in the way of models and examples is to be learned from the American Indians, for their relation to this part of the earth seems to me to have been exemplary. Our assumption that we could learn to live here, ignoring their example, in a cultural disaster as well as an ecological one. But we have a great deal to learn from all truly indigenous peoples. The agricultural practices of primitives and peasants ought to be particularly instructive to us, for these people have formed the land with a sense of profound unity with it; their ways, learned slowly over generations out of an intricate knowledge of the land and its needs, have tended to preserve it.

One of the richest sources of information about peasant agriculture is a book called *Farmers of Forty Centuries* by an American professor of agriculture, Sir Albert Howard, K. In 1907 King traveled in Japan, Korea and China, looking closely at the local practices of agriculture and land management everywhere he went. He talked with experts and with peasants. He was full of interest in the knowledge and the life of farming. His book is loaded with details of the life of the people, observed sharply, and put down with delight and sympathy.

The question that King bore in mind throughout his travels was how these people had preserved their land, which after thousands of years of intensive use was as fertile as ever. The answer involved a complexity of methods and practices and traditions, but what it amounted to was that the taking of produce from the land was always balanced by a return of organic matter. The sewage of towns and cities, instead of being flushed out to pollute the waterways as with us, was brought back to the fields; the mud dredged from the canals was carried to the fields; no organic waste of any kind was ever thrown away, but always worked back into the soil.

King has a lot to say about the methods of composting, intertillage, crop rotation, irrigation, green manuring, and so on. He has a scientist's respect for statistics and he supplies plenty of them. But he also gives the sort of lively information that he could only have got by talking, by "passing the time of day," with the people he met in the fields. He writes of practices, tools, materials, dimensions. His book is the best sort of manual: it is one of the pioneer books on organic farming. And for the same reasons it is the best sort of travel book; he talks occasionally about how the plants are cared for around some temple or shrine, but for the most part avoids "tourist attractions," the life of the ordinary people, its sources and ways, was what fascinated him. There are more than two hundred photographs, not the work of a gifted photographer, certainly, but informative and useful.

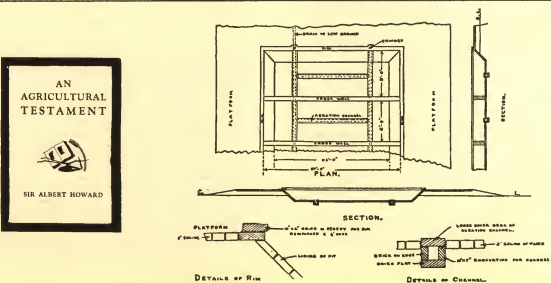
This is a book that can suggest things for you to do, if you have a piece of ground to do them on. Whether or not you have a piece of ground, it is a book that can change your mind.

[Suggested and reviewed by Wendell Berry.]

Still out of print though coming back soon.

## Farmers of Forty Centuries

F. H. King  
1911, 441 pp.



Plan and working details of composting pits at Tollymore, Calcutta.

## Living the Good Life

Some decades ago Scott Nearing gave up as an academic and retreated to the Vermont woods, where he promptly began to rediscover for himself how to stay alive in the North Temperate Zone. His advice is in this book. He invented a method for building stone houses very cheaply, he perfected a way of living into the winter on crops taken in the summer from ingeniously constructed gardens, and he relied—perhaps more than anyone today will care to rely—on a division of his labors between the hands and the head. He was a man community. He never wasted anything (it will drive you mad to hear his paens of praise for used motor oil), he tried to ignore machines wherever possible, he tried to live on a cash-less basis (and largely succeeded), and he annoyed his old-time Vermont neighbors by living in a more down-to-earth life than they ever could and showing them how to maple-sugar and farm. He beat them at their own game, and for thirty years it lasted—until the ski crowds began to trickle up into suburbia. Nearing fled to Maine where, presumably, he's started all over again. Lots of savvy advice in here, and a good picture of how it works in practice to turn your back on advantages that you know are right out there waiting for you. Nutrition Freaks will find the Nearing book a new challenge. Nearing is not spring chicken, and so if nothing else this book will shame you into getting up and getting moving.

[Reviewed by Stephan Chodorov]



Scott Nearing tending a vegetable garden.

## Malabar Farm

*Bromfield was a Pulitzer Prize-winning author who at the start of Hitler's war returned to his boyhood home in north central Ohio, bought several worn-out farms, established something which would probably be called a commune if it were done today (it wasn't called that then, as Bromfield and the people associated with him were ultra-respectable), and proceeded to use good conservation practices and numerous innovations to restore his land to fertility and health.*

[Suggested and reviewed by Pat Patterson]

Malabar Farm  
1947, 1970; 40 pp.

\$1.25 postpaid

from:  
Ballantine Books, Inc.  
101 Fifth Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



Living the Good Life  
Helen and Scott Nearing  
1970, 214 pp.

\$2.25 postpaid

from:  
Schocken Books  
67 Park Avenue  
New York, New York 10016

or WHOLE EARTH CATALOG



We chose stone for several reasons. Stone buildings seem a natural outgrowth of the earth. They blend into the landscape and are a part of it. We like the varied color and character of the stone, which are lying around unused on most New England farms. Stone houses are polished, dignified and solid—and in fact, standing as they are for generations. They are cheaper to build, needing no paint, tile or upkeep or repair. They will burn not burn. They are cooler in summer and warmer in winter. If, combined with all these advantages, we could build them economically, we were convinced that stone was the right material for our needs.

...we soon discovered that after the building was finished, the different rate of expansion for concrete and wood pulled the two apart at joints, leaving a small crack between the frame and the concrete wall. We remedied this in late construction by cutting a square groove all around the outside of the frame and inserting a steel strip of wood which projected  $\frac{1}{4}$  inch or a little more beyond the center of the frame into the concrete. Later we improved this method still more and cut a groove half an inch deep with a saw and set a piece of galvanized metal  $\frac{1}{4}$  inch wide into the groove. This took less time than inserting the wood strip and served the same purpose of bridging the crack between frame and concrete.

We would attempt to carry on this self-subsistent economy by the following steps: (1) Raising as much of our own food as local soil and climatic conditions would permit. (2) Barring our products for those which we could not or did not produce. (3) Using wood for fuel and cutting it ourselves. (4) Putting up our own buildings with stone and wood from the place, doing the work ourselves. (5) Making such implements as sleds, drays, stone-boats, gravel screens, ladders. (6) Holding down to the barest minimum the number of implements, tools, gadgets and machines which we might buy from the assembly lines of big business. (7) If we had to have such machines for a few hours or days in a year (plough, tractor, rototiller, bull-dog, chainsaw), we would rent or trade them from local people instead of buying and owning them.

All our contour plowing, cover crops, and strip cropping have paid us great dividends. Throughout the drought when farms all over Ohio were hauling water, our springs kept up their flow, because the methods we took to stop erosion and the run-off of surface water had stored up great quantities of water underground. When we came here about 80 percent of the water in a heavy rainstorm ran off the place; today we keep on the place 80 to 90 percent of the rain that falls, trapped by soil, contours, and strips. It sinks deep into the earth to replenish the reservoirs in the great crevasses in the underlying sandstone rock.

The proper use of the land plus a simple program of game food and over has certainly paid big dividends in fish, birds, and game. Everywhere at Malabar, since we established the farm as a game propagation area, the population of wild life has doubled and redoubled, again and again. Once the area became a refuge, the excess population moves off into the neighboring territory where it does not shoot but for hunters. We do not shoot on the farm and allow rabbits are especially abundant. Of course there is always plenty of quail (on which in Ohio there is no season) and some grouse and pheasant although the foxes kill off the latter pretty rapidly.

The whole theory of the ability of healthy plants grown in organically balanced and compact, mineralized soils to resist disease and even to some extent attacks by insects is not altogether new, either in the field or in the laboratory, but it is largely unknown in general agriculture. The theory of putting into the soil the means of resistance rather than applying it externally by poisons and sprays is much more revolutionary and comparatively little research has been done along these lines.

## Walden

This edition is the one, I believe, that Thoreau would have bought. It costs sixty cents. The prime document of America's 3rd revolution, now in progress.

—SB

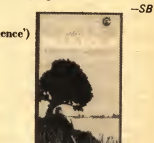
## Walden (and 'Civil Disobedience')

Henry David Thoreau  
1854; 255 pp.

\$0.60 postpaid

from:  
New American Library, Inc.  
1301 Ave. of the Americas  
New York, N.Y. 10019

or WHOLE EARTH CATALOG



Most of the luxuries, and many of the so-called comforts of life, are not only not indispensable, but positive hindrances to the elevation of mankind. With respect to luxuries and comforts, the wisest have ever lived a more simple and meagre life than the poor.

The customs of some savage nations might, perchance, be profitably imitated by us, for they at least go through the semblance of casting their slough annually; they have the idea of the thing, whether they have the reality or not. Would it not be well if we were to celebrate such a "Buck," or "Feast of first fruits," as Bartam described to have been the custom of the Mucclasse Indians? When a town celebrates its "Thanksgiving," having previously provided themselves with new clothes, new pots, pans, and other household utensils and furniture, they collect all their worn out clothes and other deplorable things, sweep and clean their houses, squares, and the whole town, of their filth, which with all the remaining grain and other provisions they cast together into one common heap, and consume it with fire. After having taken medicine, and fasted for three days, all the fire in the town is kindled. During this time they abstain from the gratification of every appetite and passion whatever. A general amnesty is proclaimed; all malefactors may return to their town.

"On the fourth morning, the high priest, by rubbing dry wood together, produces new fire in the public square, from whence every habitation in the town is supplied with the new and pure flame."

I learned this, at least, by my experiment: that if one advances confidently in the direction of his dreams, and endeavors to live the life which he has imagined, he will meet with a success unexpected in common hours. He will put some things behind him, and will pass an invincible boundary, new, universal, and more liberal laws will begin to establish themselves in him; or, if he is behind him, the old laws be expanded, and interpreted in his favor in a more liberal sense, and he will live with the license of a higher order of beings. In proportion as the law becomes his law, the law of the universe grows less complex, and solitude will not be solitude, nor poverty nor weakness; nor weariness. If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them.



THE LESSON OF THE DEER

Divine Right and Estelle were sitting in folding chairs drinking beer and eating cashew nuts while the Lone Outdoorsman grilled steaks over a charcoal fire. Like Estelle and Divine Right, he had dressed for the occasion too. He had on a cowboy hat and cowboy boots, a pair of levis, a flannel shirt with a vest and, while he cooked, a knee-length pair of pants that were white anywhere he didn't have blood stains on it. Now and then a breeze would swirl the smoke up in a cloud around his head, momentarily disorienting him so that it appeared that there was only his wild, round body in cowboy clothes tending the slab of meat on the charcoal fire. It was a surreal scene all right, but D.R. and Estelle were both so stoned it struck them as the most ordinary of domestic occasions. It was dark by now, and there wasn't any moon. The trees around the camp framed the entire scene, and there wasn't a witness. What they saw was all there was anywhere in all creation, and for heads as simple as theirs, it was all there was. It was that was quite enough.

"I'm a creb," D.R. suddenly called out to the Lone Outdoorsman. "My sign is the creb. I get where I'm going by walking sideways."

The Lone Outdoorsman nodded as he turned the steaks. "Yeah. I'm in the Fin, Fur and Fash Club myself, grunt bunch guys."

"Got him!" Estelle exclaimed, swatting a fly mosquito on her arm.

"Yeah," said the Outdoorsman. "They're pretty bad tonight. We'll go in soon as these steaks are done. Time for Hestwood, Westward anyhow."

"You got TV?" Estelle asked.

"Sure. It's a little one, but you can see it all right."

"Far out! Can we watch it too?"

The question passed the Outdoorsman. He turned to look at his guests. "Of course you can. You're my guests, ain't you?"

"Fantastic!" Estelle and D.R. were so excited by the prospect of TV they leaned their chairs together and gave each other little hugs.

"We haven't seen TV since we left Oregon."

"How long ago was that?" asked the Outdoorsman.

"I don't know," said D.R. "When did we leave Oregon?"

"Three weeks ago tomorrow."

"Three weeks ago tomorrow," D.R. said to the Outdoorsman.

"Shucks. I drove here from Phoenix in a day and a half."

"Yeah, well, you see," said D.R. and he got out of his chair and walked closer to his host. "You see, I'm a Creb. My sign is the creb. I get where I'm going by walking sideways."

"I plan to take a different route back to Phoenix myself," said the Outdoorsman. "See you never know where America's, there's always some new country. That's the

thing about America, there's always some new country to see."

(continued)



## Long-Legged House

Wendell Berry is the Sergeant York charging unnatural odds across our no-man's-land. Conquering the same limber innocence of young Gary Cooper, Wendell advances on the current crop of Krauts armed with naught but his pen and his mythic rider-gunner righteousness. One after the other he picks them off, from the flying bridges of their pleasure boats as they roar through his native Kentucky rivers, from beneath the hard hats in the Hazard County strip mines, from the swivel chairs in the Pentagon where they weigh the various ways to wage war on all forms of enemy life beyond the end of their own friendly chin. He's a crackshot essayist, and, for those given to capture, a genial and captivating poet. He boasts a formidable arsenal of novels, speeches, articles, stories, and poems from his outpost in one of the world's most ravaged battlefields where he writes the good fight and tends his family and his honeybees. Consider him ally. Here are some samples from *The Long-Legged House*.

(Reviewed by Ken Kesey)

## The Long-Legged House

Wendell Berry  
1971, 215 pp.

\$1.25 postpaid

from:  
Ballantine Books, Inc.  
101 Fifth Ave.,  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



For do not all our rights have as their ultimate expression and meaning the right of a man to be secure in his own home? When this right is no longer defended by a power greater than himself, his duty is to come to him by accident, in default of whatever caprice of power may next require his life.

Man cannot be independent of nature. In one way or another he must live in relation to it, and there are only two alternatives: the way of the frontiersman, whose response to nature was to dominate it, to assert his presence in it by destroying it; or the way of Thoreau, who went to the natural places to become quiet in them, to learn from them, to be restored by them.

The years I spent between childhood and manhood seem as strange to me now as they did then. Clumsy in body and mind, I knew no place I could go to and feel certain I ought to be there. I had no very good understanding of what I was rebelling against. I was going mostly by my feelings, and so I was rarely calm. And I didn't know with enough certainty what I wanted to be purposeful about getting it. The Canons offered me a place to go, but I didn't know how to allow them the dignity of solitude. And there were days there, too, in no other place, when as if by accident, beyond any reason I might have had, I was deeply at peace, and happy. And those days that gave me peace suggested to me the possibility of a greater, more substantial peace—a decent, open, generous relation between a man's life and the world—that I have never achieved but must have begun to be, and it has come more and more consciously to be, the hope and the ruling of my life.

In a blundering, half-aware fashion I was becoming a writer. And, as I think of it now, school itself was a distraction. Although I have become, among other things, a teacher, I am skeptical of education. It seems to me a most doubtful process, and I think the good of it is taken too much for granted. It is a matter that is overhauled and overvalued and always discovering to our delight, no substitute for experience or life or virtue or devotion. As it is handled out by the schools, it is only theoretically, and it is only a dimly mixed handful of seeds carried in one's pocket. When one carries them back to one's own place in the world and plants them, some will prove unfit for the climate or the ground, some are sterile, some are not seeds at all but little clods and bits of gravel. Surprisingly few of them come to anything. There is an incredible waste between the classroom and the world. How can you take from one to the other except by a blind jump? School is not so pleasant or valuable an experience as it is made out to be in the theorizing and reminiscing of elders. In a sense, it is not an experience at all, but a hiatus in experience.

What has interested me in telling the history of the Camp is the possibility of showing how a place and a person can come to belong to each other—or, rather, how a person can come to belong to a place, for places really belong to nobody. There is a startling reversal of our ordinary sense of things in the recognition that we are the belongings of the world, not its owners.

## Farmer's Almanac

The almanac for weather forecasting (a year in advance), astronomical information, holidays, planting and cultivating, hunting and fishing, cooking, nautical information, livestock and poultry farming, and various other necessities of rural living. It includes astrology, entertainments (essays, poems, puzzles), practical information, old superstitions, and New England "pleasantries." It's main emphasis, however, are on weather forecasts, farming data, and astronomy. Try to get one without ads.

(Reviewed by David Marston)

## The Old Farmer's Almanac

John D. Hale, ed.  
144 pp.

\$0.50 (published every Fall)

from:  
The Old Farmer's Almanac  
Dublin, New Hampshire 03444

or WHOLE EARTH CATALOG

## SEPTEMBER hath 30 days.

[1971]



This is the month in which the world began,  
A month better called than this, this month of June.  
How joyful our harvest, our blessings and future  
Two months start now our hope to achieve.

D.	M.	D.	Dates, Festivals, Fairs, Aspects, Tide Heights	Weather	Farmer's Calendar.
1	W.	1	1st day of the month	1st day of the month	When I was a boy, and old folks told a Sunday walk over his land, about 200 acres of oak and pine, a spruce, brook, swamp and pasture. A single big path went directly through the trees.
2	Th.	2	2nd day of the month	2nd day of the month	On Sunday Day said, "We need another path. Go ahead and make it!" I knew well enough how to use my axe, the big brush cutter, and the pruning saw, though I never cut a path.
3	F.	3	3rd day of the month	3rd day of the month	But the next day, all excited, I went down past the big place where the cows had their own path through the berry bushes. I went in and tramped back and forth blaring to the special places I wanted my path to be—
4	Th.	4	4th day of the month	4th day of the month	spring, down the brook to the white birches, the porcupine rock and the den, and along the pine knoll where you found the lady slippers and the May flowers and the hobble bush in springtime.
5	F.	5	5th day of the month	5th day of the month	Did I admit that something about that path wandering, but it was going to be a path, a little wandering path, the sun looked into and the trees arched over.
6	S.	6	6th day of the month	6th day of the month	When I was cutting, by mistake I had cut beyond two of my special places. So I made two little extra paths. They called them "wandering paths." But I liked it all, and I was glad.
7	S.	7	7th day of the month	7th day of the month	I remember this now, for my grandsons, who live over the hill in the city, are cutting their own path to our home.

The Harvest Moon is the one nearest the equinox, on this day it is close to it.

## Countryside

This is a new publication (started in 1970) I think and a mild one. It gently lays out tips and speculations and rumormongers about country living that aren't a bit sensational, but are a bit useful.

—SB

## COUNTRYSIDE

## Countryside

Jerome Belanger, ed.

\$3 (yr bimonthly)

from:

Countryside  
318 Waterloo Rd.  
Marshall, Wisconsin 53659

Here's a good example of how availability increases consumption (and waste).

When water has to be carried from a well, average usage is 8 gallons per day. When a pump is put at the kitchen sink and the consumption increases to 10 gallons per person per day. Put in a faucet and that figure goes up to 12 gallons. Introduce hot water in the kitchen and you'll use 18 gallons a day.

## Cities Aren't Places Any More.

Practically everybody I know in California is talking about "the land thing." The visions I hear, almost daily, range from buying the northeast third of New Mexico, to getting a three-acre spread in Maine. People with access to half a million dollars of the old man's loot are in the same dream with people saving three dollars a week in a glass jar. Land. Rural land. Land in the direction of east. Western drive has brought us here. Eastern serenity, or the desire for it, is nudging us back again.

Probably everybody into "the land thing" would explain his motives in different, or at least personal, language. But I think the theme running through any variety of language would be the same. I think the thing we're talking about is no more or less than a desire to understand that we have to have a home. A home, and a sense of home that can only grow out of a sense of place. Cities aren't places any more. They're scenes, projected on screens, then bulldozed away, neighborhood by neighborhood, like cancelled TV shows. People who are tired of seasonal touring, or wanting to anyway, longing for a place, torn between the joy of getting out of town, and a vague despair that maybe there ain't no such thing as place after all, that maybe all we have is a shield, a piece of land in outfluffed bushes, floating along the bloodless traffic arteries of the world.

I guess the essential thing that sustains me as I try to live in the California suburbs is the sense I carry around in my mind that, in fact, there are some places left in the world that are very nice, places left over from how the world used to be, continuing in a kind of time-warp that surrounds them like a shield. I'm sure there are similar places in every state. But the ones that I know about are in Kentucky, certain towns, certain counties that go on, and on. There's a social fabric in those places intact from their very beginnings as towns and counties, and what I wish is that that fabric could somehow be decelerated, a national treasure, and given protection, like the mountain lion, or the California condor. That won't happen, of course. The fabric is already badly torn by new freeways and the coal industry, with strip-mining as its cutting edge. So I guess the best that one can hope for is that the surviving old places be studied as models for the new places about to create themselves.

Gurney Norman

## New York State Conservation Publications

This seems a remarkable bargain. Free information leaflets on no end of intriguing subjects. You can order a maximum of 3 at a time.

—SB

[Suggested by Jonathan Goodman]

## Catalog, leaflets

## FREE

from:  
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New York State Conservation Department  
Albany, N.Y. 12226

## Poison Ivy

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Survival Kit (How to Make Your Own)

Tanning (Buckskin Briefing)

Terraria (How to Make Sectional Terraria)

Forms (How to Buy on Old Farm)

Wood Duck Nesting Box - Housing for Ducks

Lake Trout (Why The Trout Fry Died - DDT)

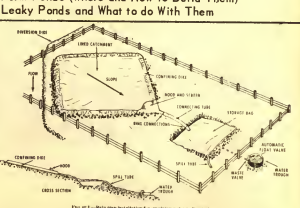
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But—put in a complete plumbing system under pressure, and usage increases to 30 gallons a day. This includes anywhere from 8-20 gallons each time the bathtub is used, 3-5 gallons each time a toilet is flushed, and 1-2 gallons each time a bathroom wash basin is used.

## Brooklyn Botanic Garden

This is an outstanding source of information on nearly everything useful relating to plants, greenhouse, vines, pruning, the lot. And a fine periodical.

—SB

## Plants and Gardens

\$3 (r) quarterly

from:  
Brooklyn Botanic Garden  
Brooklyn, N.Y. 11226

## PLANTS & GARDENS

## Plants, Man & Life

The classic on the domestication of plants, by a damned interesting man. Bless him, he annotates his bibliography. —SB

Plants, Man & Life  
Edgar Anderson  
1952; 251 pp.

\$2.65 postpaid

from:  
University of California Press  
2223 Fulton St.  
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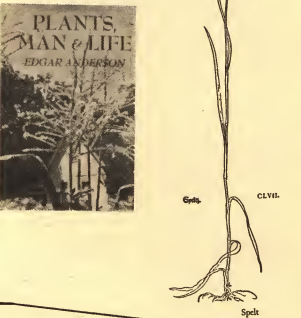
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Order by name and number. Make checks payable to Brooklyn Botanic Garden  
1000 Washington Avenue, Brooklyn, New York 11225

Few Americans realize how completely our American meadow plants came along with us from the Old World. In our June meadows, timothy, redtop, and bluegrass, Old World grasses all three, are started with Old World seeds, yellow, buttercup and hawkweeds. The clovers too, aliske and red Dutch, all came from the Old World. Only the black-eyed Susans are indigenous. An informed botanist viewing such a June meadow may sometimes find it hard to point out a single species of plant which grew here in pre-Columbian times.

Ever since I first saw acres of wild sunflowers blossoming in gold and green confusion down the back slopes of Dagoh Hill in Saint Louis, I have been intoxicated with sunflowers. They happen to be of key significance in the story of plants and man; if they were not I should be tempted to tell you about them anyway. I wish it were possible fully to communicate my enthusiasm for these lusty brilliant flowers, these coarse and robust weeds which have been so closely tied up with man during his varied history on this continent. Crop plant, garden flower, roadside weed, growing unasked but seldom unwanted on vacant lots and rights of way. I wish one could in a few sentences paint the full pageant of them in any one year. The colonies of them in railroad yards in our larger eastern cities, the thousands upon thousands of acres in the Great Plains, long solid rows of them bordering roadsides and windbreaks in some of the irrigated valleys, little bunches of them in neat food gardens beside the neat tops, here after ecore grown in all western Canada. Or the fields of them in Peru and in Europe, single rows of them in allotment gardens at the fringes of cities, masses of them in Hungary and the Ukraine where they are grown for cooking oil. But with all my enthusiasm for them, with all my understanding of their high yield, I do not advise you to try growing them on an American farm year after year in efficient mass production.



Estelle asked the Lone Outdoorsman if he lived in Phoenix. She'd come over to the fire and was holding a plate while he piled the steaks on. "Honey, as she was, she was already plotting in her mind to steal part of their supper in her bag for they'd have something to eat the next day. She'd already scored a can of beer and a handful of cashew nuts. What she wanted now was half a steak and at least one cooked potato. She would have scooped a potato off the platter than then if the Outdoorsman had given her a chance. But he said, "I'll help you with that," took the platter and led his guests around the truck and through the narrow door of his camper.

"Yeah, I'm from Phoenix," the Outdoorsman said. "My grandfather helped settle this place in the 70's. Came out with the United States Cavalry, chasing after Proud Person, the Apache renegade."

"Did he catch him?" D.R. inquired.

"Well sir," said the Outdoorsman. "As a matter of fact, he did."

"Far out. What did he do with him?"

"Took him to jail. Made him promise to quit bothering people, then let him go."

"Old Proud Person keep his promise?" asked Estelle.

"He did. Proud Person was a good Indian from then on. My grandfather was proud of him. He used to talk about it a lot. He got out of the Army and settled there in Phoenix as a grocer."

Proud Person used to come in from the hills about once a year and trade with him. They became life-long friends. My grandfather was a tough old coddler, but that's one thing you can say for him, he was always a believer in giving folks a second chance."

The Outdoorsman was quiet than as he chewed a bit of steak. When he'd swallowed he set his plate aside and got up to turn the TV on.

The television set was a little portable with a four inch screen. It sat on top of the refrigerator toward the rear of the camper.

Estelle and the Outdoorsman were seated on benches on either side of the little room, with Olive Right between them sitting on a stool at the end of a table that folded out of the wall. Behind and above O.R. was a sleeping space that consisted of the canvas on either side of the entrance to that space were the mounted heads of two small deer, both of them does. D.R. noticed them as soon as he came in. He didn't want to sit under them but he didn't want Estelle to have to either. Somehow the two does reminded him of Estelle, and he didn't like the thought. If he hadn't been on the crest of a good food at the time, the two dead-eyed deer would have depressed him terribly. But Olive Right was about two steps back from his ordinary responses now, and the two mounted deer were no more than a minor weight upon his consciousness.

He was even slow to laugh when he asked the Lone Outdoorsman where he'd bagged the deer and the Outdoorsman said he'd run over them with his truck.

"Both of 'em at once?"

"No. But within a week of one another. It was the strangest thing. Soon as I got my truck fixed from hitting the first one, I was out in the hills again. It'll be damned if another one didn't crash right into my fender."

O.R. laughed. "Sounds to me like those deer were trying to tell you something."

"Could be," said the Outdoorsman. "Cost me four hundred dollars to get my front end fixed."

## The Oxford Book of Food Plants

A beautiful book, for looking and for reference. Color plates as illustration of every plant, emphasizing the part which supplies food. Arranged in a practical way—plants are grouped according to the kind of food they produce: fruits, herbs, leaf vegetables, oil crops, sugar crops, root vegetables, etc. Common and botanical name included, and an index which lists both, plus a glossary of descriptive botanical words. Descriptions of each plant tells its use, history, countries of origin and regions where it grows, along with a physical description accompanied by a drawing, food value, and economic value.

(Reviewed by D. Smith)

The Oxford Book of Food Plants  
G.B. Masfield, M. Wallis  
S.G. Harrison, J.B.E. Nicholson  
1969, 200 pages

\$11.00 postpaid

from:  
Oxford University Press  
16-20 Potters Drive  
Fair Lawn, New Jersey 07410

or WHOLE EARTH CATALOG



## The Organic Gardening Books

When I first started gardening three seasons ago, I considered how to grow vegetables and fruits by the Organic Method as the first and last word on raising your own food. And I still believe that if you intend to own only one gardening book, that's the one to have. In addition to all the facts you need about soil, compost, mulch, and most domestic fruits and vegetables grown in North America, the book contains beautiful statements by individual gardeners, and by the editors themselves, that add up to an eloquent testimony in behalf of the organic idea. It is these statements, these images of gardeners as people trying to make their very lives organic, that gives the book its strength and true distinction. It's a book to turn a person on to the organic idea in the first place, and then go on to show him in precise detail ways to put that idea into practice. The book is an indispensable guide for the beginning organic gardener.

The thing I have discovered through further reading and continued gardening, however, is that, as good as it is, *How to Grow Vegetables and Fruits* is neither the first nor the last word on the subject. There's a new book out now called *Grow Your Own*, by Jeanie Darling, that to my mind comes closer to being the first word. And two other sources, *The Encyclopedia of Organic Gardening* and all of Ruth Stout's work in general, strike me as being closer to final statements.

All I mean by "first" and "last" is that *Grow Your Own* is for gardeners who are absolutely just beginning, and not only beginning, but beginning in a city at that, right up there on the very front lines where conditions come closest to impossible; while the other sources I mentioned are for people who have had gardening experience and are out to improve upon, rather than discover, their individual methods.

*Grow Your Own* is by a young Berkeley, California woman who did the whole organic trip in a plot ten feet by ten feet outside her home, paid close attention to what was going on, did careful homework, and then turned it all into a lovely little paperback book. It's an extremely personal book, sort of like a letter to close friends, charming and informational. (Of ladybugs, Jeanie says: "Imagine Volkswagen humping. That's what ladybugs look like when they mate.") The first audience for *Grow Your Own* is other beginning gardeners in the San Francisco Bay region, because much of the information on soil, weather and sources of organic supplies are of a local nature. But it is by no means a purely "local" book. It's a community book, but the community Jeanie is speaking to, and for, is scattered everywhere, and geography will not greatly diminish the book's practical usefulness. As the book serves the community with facts, it also helps create it in spirit. It establishes Jeanie as a kind of hero, in that by this she has gained the experience of a professional without sacrificing the joyous spirit of the amateur. She's a freak, but she's a competent freak, and competent freaks just may be the most important people in the entire culture at this nervous point in its development. *Grow Your Own* is a solid achievement that everybody in the community can not only benefit from, but feel proud of.

A lot of experienced gardeners find *The Encyclopedia of Organic Gardening* more useful than *How to Grow Vegetables and Fruits*, and this is understandable. Once you're deep into gardening, past the point of needing to be convinced and wanting only to get on with the work at hand, the *Encyclopedia* does stand as a handy, more efficient tool. There's a table of contents. The subjects are not laid out in categories. It's all there in alphabetical order, crapple followed by crabgrass; tobacco followed by tomato; lima beans, lime,

lime tree, limonium, linaria and linden. Virtually any question you'd like to ask a master gardener is anticipated and answered here, and beyond that, a lot of questions that wouldn't have occurred to you are asked on your behalf and then answered. You wind up with a lot of accidental knowledge, browsing in this volume, and that's always fun and frequently immediately useful. I can best sum up my feelings about the *Encyclopedia* by simply saying that after three seasons as a gardener, I'm about to buy a copy, instead of borrowing any more, out of an impulse to acquire literature on gardening to match my own level of competence and curiosity.

If you were to chart a course from *Grow Your Own*, through *How to Grow Vegetables and Fruits*, on into the *Encyclopedia*, you'd wind up, of course, in Ruth Stout's garden watching her ignore practically everything you just learned from all those books as she grows stuff twice as good and ten times as easily as you do. Well, not really ignoring it. Just seeing it in the same way that your grandmother ignores the rest of the world, and in the same way that you ignore the printed recipe as the sort of unconsciously mischievous bit of stuff together and throws it in a coal stove oven to make the best Sunday dinner you ever sat down to. Ruth Stout is a master gardener who is never refining her procedures for decades now. She's sort of the elderly Zen priest, an old roshi who after years of work and study has distilled a large burden of "knowledge" into a single gem of wisdom which he renders in a single haiku. Just at the point that I felt like I was really catching on to making compost and feeling kind of proud, I found out that Mr. Stout doesn't fool with compost anymore. Too much trouble. Doesn't fool with tools much either. Doesn't fool with anything much, actually, except hula hoops. Just spreads a lot of bay around, plants by poking a hole in the ground with her finger, and when it's time, goes out and picks the produce and eats it. I'm confident that if I were to do everything in my garden that she does in hers, mine would still fail while hers would flourish, simply because I'm too young and foolish to get along without some rules. It's the difference between wisdom and knowledge, between having correct information and knowing the truth. It'll be needing "the facts" for a long time to come, but Mr. Stout assimilated all of that long ago. She just... does it, and her accounts of doing it are among the very best statements in organic gardening that you're likely to come across.

The thing to remember about organic gardening is that it's a movement, a national energy that since its beginnings early in the 1940's has grown into a force so potent by now that it contains serious political implications. The books I have mentioned are landmarks in this movement. More central to organic gardening as a movement is a monthly magazine published by the same Rodales who brought out the *Encyclopedia* and *How to Grow Vegetables and Fruits*, called *Organic Gardening and Farming*. It has occurred to me that if I were a dictator determined to control the national press, *Organic Gardening* would be the first publication I'd squash, because it is the most subversive. The whole organic movement is exquisitely subversive. I believe that organic gardeners are in the forefront of a serious effort to save the world by changing man's orientation to it, to move away from the collective, centrist, super-industrial state, toward a simpler, realer one-to-one relationship with the earth itself. Most of the current talk about "ecology" in America is simply the noise that accompanies all facts. It's obviously doomed to go the way of hula-hoops and the fifty-mile hike. The thing I like to remember is that even when all the froth has blown away, and the rhetoric of pop-ecology has drifted off to join the other forms of noise in the sky, the gardeners are going to still be gardening. They're going to quietly go on composting and tilling and planting, and then replacing all the good things they have sown.

[Reviewed by Gurney Norman]

## The Basic Book of Organic Gardening

For \$1.25 get Rodale's basics.

**The Basic Book of Organic Gardening**  
Robert Rodale, ed.  
1971; 377 pp.

\$1.25 postpaid

from:  
Ballantine Books, Inc.  
101 Fifth Ave.,  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

1. Perennial crops such as asparagus, strawberries, and rhubarb should be located at one side of the garden.
2. Tall-growing crops, such as corn, must be kept away from small crop like beans and carrots to avoid shading.
3. Provide for succession crops—such as fall garden, small fruits, and overwintered crops to mature early in the spring. In this way, space for spring crops will be harvested early, may be used again for later crops. Examples: tomatoes after radishes; cucumbers after spinach.
4. Early planted, fast-growing, quick-maturing crops should be grouped together. Examples: radishes, lettuce, early cabbage, scallions, etc.
5. Provide plenty of vegetables for canning, freezing, and storing.
6. Do not overplant new varieties, vegetables which the family does not like, or too much of any one vegetable at one time.
7. Rows should follow across the slope (on the contour) in hilly areas.
8. Make sure the plan provides the best spacing between rows for the method of cultivation that you intend to use (hand, tractor, horse).
9. Run rows north and south if possible to prevent plants from shading one another.
10. Long rows save time in care and cultivation. Several crops may be planted in the same row if the distance between rows is the same.

### Where to Order National Controls

#### Ladybugs

Bio-Control Company  
Route 2, Box 228  
Auburn, California 95603  
L. E. Schor  
Rte. 1, Box 12, Ready, California 95975

#### Praying Mantises

Eastern Biological Co. Co.  
Route 5, Box 379  
Jackson, New Jersey 08527  
Gothard, Inc.  
P.O. Box 332  
Canastota, Texas 79836  
Robert Robbins  
424 N. Courtland  
East Stroudsburg, Pennsylvania 18301

Lacewings (Aphidius) and Trichogramma Wasps  
Vitova Insectary, Inc.  
P.O. Box 100  
Rialto, California 92376

Tri-O (Trade name for Trichogramma)  
Gothard, Inc.  
P.O. Box 370  
Canastota, Texas 79836

#### Milky Spore Disease

Doom  
Fairfax Laboratory Laboratory  
Clinton Corners, New York 12514

#### Bacillus Thuringiensis Disease

Thuricide  
International Minerals & Chemical Corp.  
Crop Aid Products Dept.  
5401 Old Orchard Rd.  
Skokie, Illinois 60076  
Bayer Dist. Co.  
Orange City, Iowa 51041

## GROW YOUR OWN

Jeanie Darling  
1970; 87 pp.

\$1.75 postpaid

from:  
Bookworks  
c/o Random House  
Westminster, Maryland 21157

or WHOLE EARTH CATALOG

Chemical fertilizers put your soil on a speed trip. The normal component balance of the soil is disturbed by the availability of more plant food than can be accepted. For a short time, everything that is living in the soil gets pushed way beyond its normal rhythm of life and of course the numbers of bacteria are depleted. Chemically treated soil is almost devoid of soil bacteria and earthworms. The structural strength of the soil is lost, and hardens form that make it hard for water to penetrate deeply. This causes dust storms and erosion problems.

A forest is an ideal example of good soil structure. The leaves, twigs, and everything else that falls to the ground, act as a mulch and gradually decay, leaving a spongy rich layer of humus on the surface below the surface. It is well balanced in all the nutrients necessary to the soil below and to all the living things in it. As the reserves are there mainly in an insoluble form, and they are gradually released by the action of the weather, the bacteria, the earthworms, and all the other micro-organisms in the soil.

Birds are good friends to the organic gardener. If you feed them seed this winter, they'll stick around and eat their share of your kingdom baddies next summer.

Sweet Peas. The climbing variety, 5' feet, is great for hiding a well or making a screen. Use trellis training. Nasturtiums. Great for hot, dry, poor soil areas. The leaves, which are peppery and high in Vitamin C, taste great in salads or cream cheese sandwiches. The flowers are good to eat too, and the green seed pods can be pickled in vinegar with a touch of malt, apple, 1 clove and salt. They resemble capers.

The first step in pest control is to have healthy plants growing in fertile soil that has been organic matter. Then they are more resistant to various diseases and insects. Step Two: Restore the balance of nature. The reason there are so many weeds in relation to other plants is that DDT has wiped out all their predators. So encourage and import predators into your garden. Ladybugs, praying mantises, ichneumon wasps, lacewings, flies, toads, lizards and birds all like to eat a wide variety of insects.

Step three: Outwit the insects. Here's where your ingenuity comes into a action. Companionate planting is the first thing to consider. The idea is that certain smelly flowers and herbs repel insects when planted next to susceptible plants. The flowers: marigold, calendula, nasturtium, geranium and chrysanthemum. The herbs: tansy, wormwood, chives, onions, garlic, sage, savory, coriander and hemp.

Children will support for Tomatoes



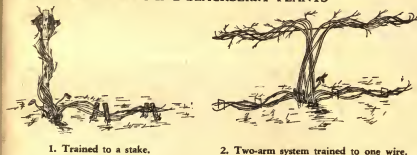
**How to Grow Vegetables and Fruits**  
by the Organic Method  
J. I. Rodale & Staff, editors  
1961; 926 pp.

**\$10.19** postpaid

from:  
Rodale Books, Inc.  
33 East Minor Street  
Emmaus, Pennsylvania 18049

or WHOLE EARTH CATALOG

#### METHODS OF TRAINING BLACKBERRY PLANTS



1. Trained to a stake.

2. Two-arm system trained to one wire.

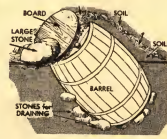
**The Encyclopedia of Organic Gardening**  
J. I. Rodale & Staff  
1966; 1145 pp.

**\$12.19** postpaid

from:  
Rodale Books, Inc.  
33 East Minor Street  
Emmaus, Pennsylvania 18049

or WHOLE EARTH CATALOG

#### A Tier-Shelf Bed for Mushrooms



A **BARREL BOOT CELLAR** can store all of most garden produce in a fresh state over the winter. A strong, well-made barrel should be used and checked carefully before being put in use.



**How to Have a Green Thumb Without an Aching Back**  
Ruth Stout  
1965; 160 pp.

**\$1.45** postpaid

from:  
Corningston Library Publications  
630 Fifth Avenue  
New York, New York 10020  
or WHOLE EARTH CATALOG



I stopped short as a thought struck me like a blow. One never plows asparagus and it gets along fine. Except for new sod, why plow anything, ever?

Why plow? Why turn the soil upside down? Why plow?  
**I AM NOT GOING TO. I AM GOING TO PLANT!**

I don't suppose I actually shouted the words aloud, but they were making a deafening uproar in my head and even in my heart. The thing in me which had, as one time and another, been subjects of comment for those who bothered to notice—my extremism, radicalism of various kinds, ignorance of and indifference to convention, to the status quo, to the written word, to the "established" fact—all of these unfashionable qualities rushed in now and took over. I would ask no one's advice or opinion. I would tell no one until I had done it, but just as sure as God made rebels and nonconformists I was going to ignore custom and tradition and I was going to plant right now.



The dirt made by building a compost pile is a very desirable thing to have, but the man who goes through all the antics necessary to make this pile is to be pitied unless he has a great deal of time and energy he wouldn't know what to do with otherwise. He is like a man, let us say, who is suffering from a physical ailment and knows of a plant, growing on a far mountain, which will cure him. He makes the long, hard journey, finds the plant and is cured.

He is well satisfied until he returns home and finds that this plant also grows in his back yard. He had no way of knowing that until he saw the plant on the mountain and compared the two. And so it is with those who build compost piles, they don't know any better way to make rich dirt. Now you are hearing of an easier, better way, you need no longer climb a mountain for your compost. It is yours for a small fraction of that labor.



**Organic Gardening and Farming**

**\$5.85** for one year, monthly  
**\$6.00** per copy

from:  
Rodale Books, Inc.  
33 East Minor Street  
Emmaus, Pennsylvania 18049



The stone wall that neighbors helped build is to the right behind the iris in the rock garden. Six years after the project started, the author writes that she is "still hauling stones . . . but it's worth it!"

#### Uses Manure Both as Fertilizer and Medicine

To keep my flower garden looking good, I use another natural resource, manure, both as a fertilizer and a medicine for every plant in my yard. I prefer horse manure for its light texture, and it makes a very nice mulch when dry. If a plant looks sick, it gets a dose of manure tea, and a new mulch of manure. I have found this a sure cure in my yard for rot in iris rhizomes, thrush in gladioli, and scale in lilacs. I haven't lost a birch tree since I started to mulch them with manure.



## Compost Science

magazine concerning itself  
with teaching the world to compost  
instead of dump or trash. Full  
page coverage from city conversion  
down to pressing and storing chickenish bricks.  
good community awareness, printed by rodale.

-jd

## Compost Science

Jerome Goldstein, editor

\$6.00 per year (monthly)

\$1.00 single copy

from:  
Rodale Press  
33 East Minor Street  
Emmaus, Pennsylvania 18049



The use of composting to convert organic solid waste into a fertilizer, soil conditioner or nutrient source, is a topic of discussion and controversy. Actually the real value of this process is disposal of solid waste with the production of a usable aesthetically non-offensive and hygienically safe residue. In this process, carbon in a high form and nutrient elements are returned for re-use in the ecological cycle rather than destroyed as waste by incineration. Various modifications of the basic process are used throughout the world for the disposal of night soil, sewage sludge and refuse. In the United States, the interest in composting has been rather limited. It has been stated that the lack of enthusiasm for composting in this country follows from the American tradition of putting wastes "out of mind" which in effect obstructs any interest in reclaiming organic solids. Recently, some cities have recognized its potential as a method of refuse disposal as other methods of treating solid waste become uneconomical.

Past attempts to produce and market compost have met with limited success. Failure is often due to the inability to market the compost competitively with chemical fertilizers. The high paper content of a typical urban solid waste makes the material resistant to degradation by competing microorganisms. Consequently, with the limited technology available, existing compost plants operate inefficiently and cannot stabilize the organic material rapidly or completely.

## Swedish Composter

Looks like it could be made as a do-it-yourself kind of kit—the inventor is looking for someone in U.S. to manufacture—any suggestions?

(Suggested by Ernest Rimmerman)

## CLIVUS IS NOT TO BE CONNECTED TO WATER OR SEWER SYSTEMS

The waste decomposes added by the supply of air and the inherent moisture (urine, wet garbage, etc.). Water vapour and carbon dioxide rise through the exhaust duct after leaving the waste mass which decreases considerably in volume and moves slowly towards the lowest chamber where the final products (soil, humus, nutritive soil) accumulate. They can be utilized as fertilizer—normally first after about 2 years and with intervals e.g. of 1-2 years.

Clivus is designed to meet the need for convenience and a hygienic and natural means of diminishing household waste and converting it remains to soil restorer on the site.

A household with Clivus needs drainage for bath, dish and laundry water only (purification separately by method suited to local conditions)—information concerning valid regulations can be obtained from the health authorities. Since Clivus takes kitchen waste normally poured down the drain, the sewer is relieved of such matter. Through purification on site, transportation (vehicles, sewers, etc.) of refuse is reduced or eliminated; outflow and spreading of contaminated matter in ground and water is prevented; the quantity of pure water used solely for the transport of excrement and refuse in the sewage network can be put to better use.

## Methane Gas Production—Harold Bate

CHICKEN MANURE FUEL. "Put a chicken in your tank" may never match the gas of Esso's "Put a tiger in your tank" slogan.

But British inventor Harold Bate will sell you that chicken power will run your car faster, cleaner and better than gasoline.

Bate has found a way of converting chicken droppings into gas—and runs his automobile on it.

By processing methane gas from rotted chicken manure and feeding it to the engine through a special device he invented, Bate says he has managed to drive his 1953 Hillman at speeds up to 75 m.p.h. without the use of gasoline.

At his farmhouse in Devon, Bate, 62, told an ENQUIRER reporter: "This is the thing of the future...all you need is a couple of buckets of manure, a tin drum and my carburetor conversion device, and you're in business."

Bate's "chicken power" has been investigated and upheld by the British Ministry of Transport.

"We've looked into it," Frank Standing, information officer for the ministry told the ENQUIRER, "and the device works perfectly."

"However, as to mass use, that seems doubtful. There is simply not enough of a supply of chicken manure to provide fuel for autos on a mass basis."

Bate says he has been running his car and five-ton truck on the methane gas—as well as heating his home with it—for years.

"The method is really very simple," Bate said. "You just put about three buckets of manure into a sealed oil drum. Put a small oil heater under the drum to keep the manure at a steady 80 degrees.

"There are two microbes in the manure which, when heated, eat each other"—this produces the gas.

"You can collect the gas in bottles or in plastic balloons for storage. Then all you do is feed the methane through an adapter into your carburetor—and you've got chicken power."

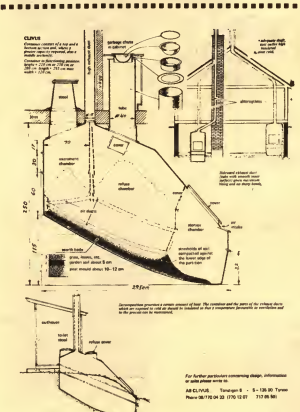
"I keep replenishing my manure supply. I run my car for about six months before I clean out the tank and start with fresh dung."

Bate said the conversion from gasoline to methane power can be made in two hours and requires no special tools. The only engine alteration required is the installation of Bate's patented device which feeds the methane from the bottle to the carburetor.

The gas, sucked into the engine by the cylinders, is ignited in the usual manner by the spark plug to produce power.

Methane is not only cheap and efficient, said the inventor, but it is better for your car—it no carbon deposit on your cylinders and no engine wear and no poisonous carbon monoxide fumes.

(Taken from NATIONAL ENQUIRER June 1970)



The Device is ready for connecting to the engine and is complete with Instructions and Drawings—also Instructions and Drawings for Methane Gas Production from Chicken-Pig-Cow-Sheep-Horse and Human manure—also the construction of Methane Gas Digesters of all sizes and costing from £ 5 upwards. The price is \$27 which included the Device and the two sets of Instructions and Drawings—also the Postage by Air Mail to any part of the world.

Thanking you,  
I Am Yours Sincerely,  
Harold Bate.

Pennywound  
Blackwater  
Totnes-Devon  
TQ 9 7 D.  
England



## Bate from Earth Move

The Harold Bate conversion kit for automobiles and vehicle engines in general, is available from EARTH MOVE for \$35. This price includes delivery to any address of a full kit exactly as distributed by the inventor. This comprises: The conversion device itself which comes ready-to-use and suits all makes and types of engines. Full instructions and drawings for the device. Full instructions and drawings for the 'backyard' methane gas production.

The device allows a vehicle to run on any gas including Propane and Natural Gas (which is methane as is gas produced from chicken manure). An emergency or permanent switch-back to gasoline power will be made at any time even while in motion.

You may be interested to know that over 100,000 automobiles have made the switch to methane recently—in Italy, including about one-third of the taxis in Milan. Gasoline stations are not necessary when using the Bate conversion unit, although there is no reason why commercially produced (pressurized) methane gas should not be used in addition to the home-made variety. All of this, and more, is apparent from the detailed information which is supplied with the kit itself.

No special tools, equipment or knowledge are required to make the conversion.

Earth Move  
P.O. Box 19016  
Washington, D.C. 20009

## Where to Get Compost Makers

I suggest that the WHOLE EARTH CATALOG list and describe the various Shredder/Grinders used for composting. Attached is a list which I have compiled of several manufacturers who advertise in the magazine Organic Gardening and Farming.

## List of Companies Manufacturing Shredder-Grinders

Amerind-Mackie Incorporated Box 111, Dept. O Parker Ford, Penna. 19457	The Roto-Hoe Company Dept. 2 Newbury, Ohio 44065
California-McCulloch Equipment Co. Box 3608 Torrance, California 90510	W. W. Grider Corp. 29578 No. Market Wichita, Kansas 67219
Gilson Brothers Company P.O. Box 152, Dept. C Plymouth, Wisconsin 53073	
Kemp Company 602 Kemp Bldg. Kenosha, Wis. 53142	
Red Cross Mfg. Corp. Bluffton, Indiana 46714	

James G. Hupp  
Orinda, Ca.

## Hilfiker Sewage

Hark the cries of waste water disposal...and behold this ecologically and biologically sound contraption:

"The Microphone Sewage Treatment System." This is a self-contained treatment plant designed to replace the septic tank for a small installation such as home, school, motel, small industry, etc. It uses redwood bark as a substrate for biological degradation of suspended and dissolved wastes, i.e., its three chambers perform the equivalent of primary and secondary treatment giving an effluent usable for agriculture, etc.

Being tried by  
Joe Brennan  
Moos Beach, CA

Information available from the manufacturer:

Hilfiker Inc.  
3800 Broadway  
P.O. Box 100  
Eureka, CA 95501

## Bardmatic Garbage Eliminator

If you have a washing machine, you may have the money and desire for the convenience of this ready-made trouble-free kitchen garbage digester-composter.

## Bardmatic Garbage Eliminator System

\$70-80

from:  
Bardmatic Corporation  
Box 1306  
Evanston, Illinois 60204

## Methane Production in India

For more detailed information on methane production from various organic wastes, send request and a large stamped return envelope to:

Ram Bux Singh  
Gobar Gas Research Station  
Ajitmal (Etawah) U.P.  
INDIA

## Composter in the Sky



My wife & I recently moved to Ben Lomond from Atlanta & although we had some difficulties in Atlanta. We've been very interested in a composter, & my wife, Sandy, believes she's found the best. It's maintenance free, accepts any food scraps—except coffee grounds, which go to the ivy, is absolutely odor-free, rather handsome & extremely convenient. It's the California Bio Fly. It's only drawback is the noise factor. My wife has tried lubricating with meat grease but that had no apparent effect.

Really, Sandy says the blue jays at any time—puts all the garbage in an old redwood stump on the bill in back of our cabin & the jays have it cleaned up in a few minutes. If anyone knows how to make them run silently, please let us know.

Don & Ben Lomond

## Biodynamic Gardening

"They plant by the moon."

"Some European mystic is behind it."

"A lot of weird theories. Nothing proven."

"They surely know their plants."

I have yet to see a 'respectable' formal evaluation of the 'biodynamic gardening' inspired by Rudolf Steiner. All I know is, the most sensational gardens I've seen all claim they owe something to biodynamic notions of soil nutrition, companion plants, and the year cycle.

The Philbrick's *Gardening for Health and Nutrition* looks to be the most practical entry into biodynamic gardening. Next level in: *Companion Plants or the Pfeiffer Garden Book*. Then Steiner's own *Agriculture, with the farthest-out illustrations (in color) ever seen in a garden book*.

—SB

### Gardening for Health and Nutrition

John and Helen Philbrick

1963, 92 pp.

\$1.45 postpaid

### Companion Plants—and how to use them

Helen Philbrick, Richard Gregg

1966, 107 pp.

\$4.50 postpaid

### Pfeiffer Garden Book

1967, 199 pp.

\$4.25 postpaid

### Agriculture

Rudolf Steiner

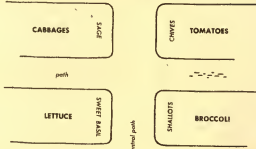
1968, 174 pp.

price unknown

all from: St. George Book Service

P.O. Box 387

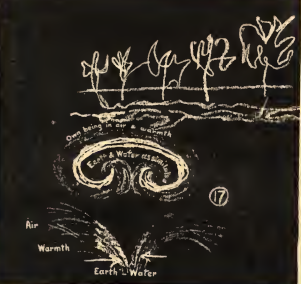
Sparrow Bush, N.Y. 12780



### Gardening for Health and Nutrition

**DANDELION** (*Taraxacum officinale*) This is an important bio-dynamic plant, used to make one of the six Compost Preparations. The growing plant produces a fine neutral humus, encourages earthworms, and is a good influence among the vegetables, so do not weed them all out. Do you know how good its young leaves are in early spring salads; that its roots may be brought indoors in late fall like endive, the leaves cut off to the crown and new ones grow for winter greens? Or the roots may be dried, chopped and used like coffee. Many people enjoy dandelion wine made from the blossoms. The cultivated variety of dandelion known in Europe is used in all these ways, but that seems difficult to start here. Wild dandelions grown in a bio-dynamic garden are fully as satisfactory. Their deep roots bring up calcium and other minerals from the soil.

Pfeiffer Garden Book



Agriculture

### WHEAT

A picture made with Pfeiffer's sensitive crystallization method

Companion Plants—and How to Use Them

### Suburban and Farm Vegetable Gardens

For 40¢, this has a lot of basic information. Maybe all you need.

—SB

### Suburban and Farm Vegetable Gardens

Robert Wester

1967, 46 pp.

\$0.40 postpaid

from: Superintendent of Documents

U.S. Government Printing Office

Washington, D.C. 20402

or Whole

### or WHOLE EARTH CATALOG

Plants grown in the hotbed or greenhouse without being shifted from the seedbed to provide more room and those shipped from the South usually have very little soil adhering to the roots when they are set in the garden. Such plants may require special care if transplanting conditions are not ideal; otherwise, they will die or at least suffer a severe shock that will greatly retard their development. The roots of these plants should be kept covered and not allowed to dry out. Puddling the roots, that is, dipping them in a thin mixture of fresh cattle manure and clay, or even clay alone, helps greatly in bridging the critical transplanting period. Planting in 4 gallons of water may be used instead of plain water. It is usually beneficial. Finally, the freshly set plants should be shaded for a day or two. Small branches a foot or two long from trees with heavy foliage, stuck into the soil on the south side of the plant row, serve the purpose.



Transplanting cabbage seedlings in Chadwick's incredible bio-dynamic garden at UC Santa Cruz, the main reason a lot of forehairs are attending the school. This photo from Cry California, Winter '71.

### Garden Way Research

A catalog of books and such for the garden and country home. Nice.

[Suggested by Gary Vaughan]

### Books and Other Tools for Garden Way Living

\$0.25 postpaid

from: Garden Way Research

Charlotte, Vermont 05445

### WHERE IT IS STILL PLEASANT TO LIVE IN THE USA

This booklet recommends seeking a place outside of the 224 Standard Metropolitan Statistical Areas, as defined by the Bureau of the Census. There are cities of 50,000 or more with their economically attached suburban communities. The SMSA's occupy only 10% of the land area of the United States. It discusses in detail a checklist of factors to be considered in selecting an area and gives the method of finding the answers to each of the questions. \$1.00, paperback.

### THE BUG BOOK: HARMLESS INSECT CONTROLS

by John and Helen Philbrick

A useful compilation of imaginative methods used by practicing bio-dynamic gardeners to combat insect and animal pests. The bugs are arranged alphabetically with accompanying sketches and descriptions for easy identification. Remedies are suggested, and in the back is a listing of effective brews and potions. An invasion of blister beetles can be checked, say the authors, by calling in the neighbors and tromping through the garden betwixt the bushes and waving sticks and shaking them off. 143 pp., \$3.50, paperback.



### WESTWARD, WESTWARD

On the TV screen the world's tiniest wagon train began inching its way across what was surely the world's smallest prairie, and Drive Right and Estelle cracked up immediately.

But the Lone Outdoorsman didn't see anything funny about it.

"What do you mean?" he argued. "Look at it, why it's two miles long or more. Count the wagons. I see fifty right there." "No! Not No!" D.R. cried. "The screen itself's only four inches wide."

"But this is a movie," the Outdoorsman protested.

"I know it's a movie," said D.R. "That's the point!"

To settle the argument, Estelle got up and held her finger against the TV screen. "I officially pronounce this wagon train we see before us veering its way across the west as being precisely one and three-fourths inches long, no more and hopefully no less otherwise it will disappear altogether."

D.R. was in hysterics. He laughed so hard he fell over backwards off his stool. And even the Lone Outdoorsman was amused now. He didn't know why, exactly. He was a little put out by the irrelevance of his guess, but their mirth was contagious. He grinned. And then he laughed as hard as D.R. did when the first line of dialogue on *Westward, Westward* turned out to be the wagon master saying "Shut up and sit down," to a lady wagon driver.

"Stuff it up your ass," Estelle replied. When the wagon master started to answer, Estelle turned his volume down so low nobody could hear what he said.

"Turn it up, turn it up!" D.R. and the Lone Outdoorsman yelled. Estelle turned it back up and sat down to eat her steak as the lady wagon driver said to the wagon master, "Have you no feelings? Don't you care about anything except your stupid westward movement? I hate the westward movement. I wish I'd never left St. Louis."

And the lady wagon driver began to cry.

(continued)

Figure 18.—Black plastic film conserves moisture, controls weeds, warms the soil, and hastens maturity of a number of vegetable crops.



## BENEFICIAL INSECTS ON THE JOB

### The Organic Way to Plant Protection

A mine of specific information: *This disease or pest with this plant, do this in response. Use the friendly bird, bug, herb, barrier, trap, mild chemical.*

—SB

The Organic Way to Plant Protection  
Organic Gardening Staff  
1966; 355 pp.

\$6.95 postpaid

from:  
Rodale Books, Inc.  
33 E. Minor St.  
Emmaus, Pennsylvania 18049

or WHOLE EARTH CATALOG



Aside from birds, there is another, more prosaic but effective insect eater—the toad.

True friend of the gardener, nearly 90 percent of the toad's food consists of insects and other small creatures, most of which are harmful. In 3 months a toad will eat up to 10,000 insects, 16 percent of which are cutworms. Mr. Toad delights on slugs and mole crickets. And golf course operators are aware of this fact. One Southern club says for a children's Saturday movie matinee every spring. Price of admission? A toad.

The toad relishes other pests too. Yellow jackets, wasps, rose beetles, spiders, ants, moths, caterpillars, flies and squash bugs are all on its menu. In parts of Europe, toads are collected and brought to market, where they are bought by horticulturists. And before the advent of insecticides, tidy housewives kept a few toads in the house to eat cockroaches and other insect pests. Toads, like people, feel there is no place like home, and possess a certain amount of homing instinct. So if you import yours from a distance, keep them penned up for a while so they can adjust to their new environment. After a spring rain, small toads can be found and collected in swampy, marshy lands and around shallow ponds.

Fiendly insects may help the gardener in his fight against the cabbageworm-butterfly. Trichogramma, commercially obtainable parasites, attack many worms of the Lepidoptera order, which includes the cabbageworm. The trichogramma lays her eggs inside the eggs of the harmful insect by the use of her pointed egg-laying apparatus. When the trichogramma egg hatches, the young parasite proceeds to eat out the contents of the egg in which it lives, causing the egg to become blank and preventing it from producing a harmful insect.

Yellow jacket hornets have been found to thrive on cabbage worms, and their presence should not be discouraged. The Braconid wasps, *Microgaster* and *Agathis* genera, are extremely helpful fly control agents. The gardener can encourage *M. areolaris* by planting strawberries, as it feeds also on the strawberry leafroller. A diu's alternate host has not yet been discovered. Avoid using poison sprays which will kill these most helpful insects.

Until this natural help arrives, the gardener can control the cabbageworm by the use of many homemade, non-toxic sprays. Dorothy Schroeder of Lyons, Colorado, has made her cabbage distasteful to the cabbageworm and the cabbage butterfly by spooning a little sour milk into the center of each cabbage.

The ladybug is a veritable nemesis to aphids and also helpful in controlling scales and other troublesome insects.

### Good & Bad Insecticides

Commercial insecticidal preparations which are relatively safe for the environment:

Antrol Aerial Violet and House Plant Insecticide Bomb  
Black Flag Ant and Roach Killer  
d-Con Double Action Ant-Roach Killer and Repellent  
d-Con House and Garden Spray  
Flea Collars (all brands)  
Formaldehyde Fumes  
Green Thumb Insecticide Spray  
Hartz Mountain Cat Flea and Tick Killer  
Hartz Mountain Dog Flea and Tick Killer  
Hartz Mountain Rid Tick  
Hartz Mountain Rid Tick Shampoo  
Johnson's No-Roach  
Ortho Isotex  
Ortho Malathion 50  
Oxalic Acid (any brand)  
Raid Flying Insect Spray  
Raid House and Garden Spray  
Raid Rose and Flower Spray  
Real Kill Household Spray  
Roaches' Last Meal  
Sal Soda (any brand)  
Spect Insecticide Granules  
Sears Sevin  
Sergeant's Flea and Tick Powder  
Sergeant's Flea and Tick Spray  
Shell No-Pest Strip (should not be used in rooms with infants or invalids)  
Spectracid  
Troar Roach Killer

In another example of how natural controls can offer effective protection, an attacking grasshopper is destroyed by the sting of the tiny red ant.

Beware of preparations containing the following. They are the compounds most likely to accumulate and cause damage to the environment and people. Know your enemy.

Aldrin	Endrin	Methoxychlor
BHC	Heptachlor	Perthane
Chlordane	Heptachlor epoxide	Stroban
DDD (TDE)	Hexachlorobenzene	Telodrin
DDT	Kelthane	Toxaphene
DDE	Kapone	
Dieldrin	Lindane	

Commercial insecticidal preparations which may accumulate and eventually cause environmental damage.

Antrol  
Antrol Ant Trap  
Confly-Pet Flea and Tick Killer  
d-Con Ant Proof  
d-Con Roach Proof  
d-Con Stay Way  
Hartz Mountain Cat Flea Powder  
Hartz Mountain Dog Flea Powder  
Hide  
Ortho Ant and Roach Spray  
Ortho Chlordane Spray  
Ortho DDT-25  
Ortho Dormant Spray  
Ortho Lawn Spray  
Ortho-Klon 44  
Ortho Triox  
Poker Ant Bait  
Raid Ant and Roach Spray  
Raid Moth Proof  
Raid Yard Guard  
Science Kelthane  
Sears Ant Killer  
Sears Flying Insect Killer  
Sears Insect Spray  
Terro Ant Killer

Prepared by Indiana University  
Biology Dept. for Crisis Biology  
Series Lectures

Sent in by  
Barbara K-G  
Bloomington, Indiana

Gothard, Inc.  
P.O. Box 370  
Cavertille, Texas 79835

Specializes in trichogramma wasps

Minemeyer's Nursery  
R.D. 5, Box 379  
New Prospect Road  
Jackson, New Jersey 08527

Mantis egg cases, both native and Chinese

Pincon Insectary Inc.  
4822 Callens Road  
Ventura, California 93003

Raises control insects for farm work

Schnoor's Sierra Bug Co.  
P.O. Box 114  
Rough and Ready, California 95975  
Ladybugs only

The Vitro Co., Inc.  
Biological Control Division  
P.O. Box 745  
Plattsburgh, California 93776

Lacewings (larvae or young adults); two kinds of trichogramma; larvae for fly maggots and armyworms.

### Bug Heartburn

If you have a garden you probably hate things like cutworms and aphids but are also afraid of giving yourself that last dose of chlorinated hydrocarbon that will do it. Solution: plant things like garlic, onion and chili pepper along the border of your garden and through the middle if it's wide. Bugs don't like these plants and will avoid them. Consequently they will also avoid your garden. If they don't then crush a chili carefully into about a quart of water, add a crushed clove of garlic and sprinkle or spray the stuff on your plants. This will give the bugs heartburn and they will never be able to patrol your garden again. Good bugs to have in your garden are lady bugs, ants, wasps, bees, and spiders. Even safe insecticides will kill them, so beware. Cutworms and other caterpillars aren't numerous and should be picked off by hand. Price and underwriting: RD and J. Hamilton

### Organic Gardening Without Poisons

A thin, padded, over-priced book with an excellent appendix of sources for organic pest control aids.

—SB

### Organic Gardening Without Poisons

Hamilton Tyler  
1970. 111 pp.

\$7.50 postpaid

from:  
Van Nostrand-Reinhold Books  
450 W. 33rd St.  
New York, N.Y. 10001



### Harnessing the Earthworm

Harnessing the Earthworm, by Thomas J. Barrett, Wildwood Press, Boston, Mass. 1959. A small (166 page) book about how everyone can help save the Earth a little bit by raising earthworms to make all the good news top soil that everyone knows all about (hopefully). You can raise them from egg cases in culture beds that Mr. Barrett shows you how to build everything. Book is in two sections: "The Earthworm & Its Environment" and "The Earthworm Under Control" and you have this man speaking in terms of hundreds of thousands—millions!—of worms per acre, each processing his own weight in dirt daily (reading in the supercritical organic material that can "turn a barren desert hostile to the human parasite" into the "earth's richest soil"). It's all there, and he's done it. I'm sorry I can't give you anymore information on price & address, but I found it in the library and you know the way they insist on cutting off the price.

Eric Warbacher  
Temple Hill, Md.

### BENEFICIAL INSECTS FOR BIOLOGICAL CONTROL

Raising insects, or even gathering them, for biological control use is difficult. As a result, there is a great deal of specialization. Most firms try to work with more than one control insect but are often short in supply of the second group. Some of the basic suppliers are:

Bio-Control Co.  
Rt. 2, Box 2397  
Auburn, California 95603

Ladybugs beetles gathered in the Sierras from winter colonies; two species; sometimes mantic cases.

Ecological Insect Services  
15075 W. California Avenue  
Kerman, California 93630

Consultation and control for both farms and gardens; sells retail

### Dead Drunk Slugs

In the February 9, 1970 issue of *Time* on page 48 is a short article on "Dead Drunk Slugs." Entomologist Floyd F. Smith found that beer, fresh or otherwise, attracted and killed 300 slugs compared with 28 slugs for a metaldehyde/arsenic mixture. The small amounts of alcohol used in such traps as "poison" would not harm small children or pets who sometimes find and eat poison bait. This new "poison" is easy to get and easy to handle. Of course, some bird might get drunk by eating an insect killed in a trap of this type but I think that is much better than dying slowly from DDT. This new "poison" can be used for almost anything. I can remember my Grandfather telling of how he got rid of unwanted pigeons by feeding them rum soaked cracked corn and dropping the drunk birds off on the other side of town.

Yours Truly,  
David Smith  
Mendham, N. J.

## Troy-Bilt Roto Tiller

\$459-\$489 (Direct factory orders get discount from 10% in the spring to 22% July thru September) You'll save enough on beer in ten hot days to pay the difference between this machine and some suburbanite deludes.

Your 14-year-old daughter may never take the Troy-Bilt over and plow under the neighbor's cornstalks with it (though it has happened) but you can still work 10 acres easier & better with this tiller than with any garden tractor in sight. Gear-driven, powered wheels—you can guide it with one hand and not come trampling along the seed bed. It also cultivates, furrows, plows snow and chops in virtually anything but trees for direct composting. Front blade tillers break your back and shake your skin loose—it would be easier to keep mules. Troy-Bilt has blades behind the wheels, so in rough going (asphalt, maybe?) I've never run into any "rough going" you could lean on the handles instead of lifting the wheels off the ground. Engineering miracle, no? They are also just plain nice people to deal with.

This review is not intended to replace the one of the Gravelly tractor. Gravelly is a fine machine, will last almost forever, and will do just about anything (with extra cost attachments.) But it costs twice what the Troy-Bilt does and I don't think it will do twice as much. Maybe on a larger acreage... but at least in the Midwest almost any implement for or farm sale will produce an old tractor, disc, harrow, buzz saw for wood cutting and brush clearing, snow blade, etc. for less than the price of a complete Gravelly outfit. None of it is the latest but with some mechanical sense and a little judicious rapping at the implement dealer, you learn what to watch for and you won't get junk either. And remember, you can't ask questions if you don't know a plow from a pump jack. Get the basics from a book—or a friendly farmer (who will probably try to sell you every piece of scrap iron on his place)—or go to a garden tractor shop and pretend you're suburbanites.

As marginal farmers follow Good Life consumption hype off the land it's only right we should take up this smaller machinery even as we use those small scraps of land that don't fit into corporate food factories. Going at it this way, \$2,000 will buy the same machines your uncle used to farm a half section—or two Troy-Bilt tillers, a chain saw, pump, and snow shovel—or the Gravelly tractor outfit—and any of them will turn you 20 acres into Eden with no strain at all. But for a simple tilling/composting machine, the Troy-Bilt roto tiller is the best thing around.

(Suggested and reviewed by Bob Kirk)

Brochure from:  
Troy-Bilt  
102nd St. & 9th Ave  
Troy, N.Y. 12182

## Mushroom Growing For Everyone

Apparently the main effort in growing mushrooms is having, or making, marvelous compost to grow them on. Beyond that they're a low-maintenance grow-em-in-corners item. This British book has the details.

—SB

## Mushroom Growing For Everyone

Ray Genders  
1969: 216 pp.  
\$6.95 postpaid

from:  
Transatlantic Arts, Inc.  
North Village Green  
Levittown, N.Y. 11756

or WHOLE EARTH CATALOG

probably cheaper from Blackwell's (p. 2).

A crop of mushrooms may be produced in boxes beneath the kitchen sink, in a cellar or in a garden shed. They may be grown in a cupboard beneath the stairs, or in an attic room, where perhaps no more than a few inches of space may be obtained with these would take the minimum amount of time to care for, just a few minutes each day. When the crop came into bearing and, provided the temperature did not fall below 45°F (7°C) there would be a few mushrooms each week for possibly three months or more.

Artificial heat is not necessary for mushrooms, but the beds (or boxes) will not bear if the temperature falls below 40°F (4°C). Though the beds may become completely frozen, no harm will be done and the crop will begin again as soon as the air temperature rises. This is another advantage in growing mushrooms in comparison with plants which may be damaged by hard frosts. Indeed, the best quality mushroom will be obtained where the temperature does not rise above 55°F (13°C), and a cool place is better than one which is too warm, when pest and disease will be at a minimum.

## Gravelly Tractor

I own an old one—and my 5 acres is more like 35. We mow, plow, cultivate, cut brush, saw wood, pump water, plow and blow deep snow, clear ice, haul, etc., with it. No haults and plenty of power. (Don't try to help it—it's stronger than you are.) Rotary plow turns organic debris under and leaves a ready-to-plant seed bed in one operation.

How did you miss it so long? Not cheap, first cost, but it will outlast them all and does a better job, James.

(Reviewed by George D. Eider, Jr.)

Brochure from:  
Gravelly Corporation  
Gravelly Lane  
Clemson, N.C. 27012

2 wheel tractors \$500-910.  
Rotary plow \$136.00  
Rotary mower \$144.00  
4-wheel tractors \$1135-1767.



## Soil Test Kit

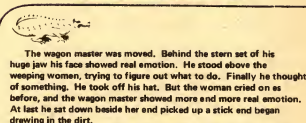
A soil test kit enables you to test your garden soil for acidity/alkalinity, nitrogen, phosphorus, and potash. A test will show what is present and what is lacking. There are test tubes, chemicals, and a color chart to gauge results. Be sure to ask for "The Organic Supplement" prepared by Organic Gardening again. If we don't know you, have decided to work with Nature's own methods of fertilization. Feed the soil, not the plant.

—Lloyd Kahn



Sudbury Soil Test Kit  
Send for descriptive literature  
Kits: \$5.95-\$39.95

from:  
Sudbury Laboratory, Inc.  
Sudbury, Mass. 01776



The wagon master was moved. Behind the stern set of his huge jaw his face showed real emotion. He stood above the weeping women, trying to figure out what to do. Finally he thought of something. He took off his hat. But the woman cried on as before, and the wagon master showed more and more real emotion. At last he sat down beside her and picked up a stick and began drawing in the dirt.

"Aw shucks, mame," he began. "I didn't mean tuh make yuh cry. It's just that, well, out here on the trail, it seems like there just ain't no time much for payin' attention tuh people's feelings. Life's hard out here, mame. And it makes a man hard. Whatever good comes out of this westward movement's going to have to be carved right out of the dust, and it ain't a gonna be easy. People get hurt, and people get bitter, and some people get killed. But I believe a great thing will come out of it all someday, mame, a brand new world where folks'll stand tall and be free and independent. Every day more people are headin' west, mame. And once you set out, there ain't no turnin' back. They've got and vision, mame. They're a very special kind of people, almost a new kind of people, you might say. People that went something more true than just comfort and security and money. This wagon train's made up of people like that, mame, people willing to work and sacrifice and give up the old things so they can learn how to do what the new world requires 'em to do. That's the kind of person you are, mame. And I mean that. It's people like you who're gonna make this new world into what it's going to be. And I'm proud to help out some. I know I make a lot of mistakes, mame, mistakes that a woman like you is bound to notice and get upset by. So I apologize, mame, for upsettin' yuh. I'll try to keep it from happenin' again. If we don't know you, have decided to work in Fort Leary in a couple of days. Everything'll be all right then."

The lady wagon driver dabbed her eyes with a hankie. Then she looked up and managed a smile through her tears. "I don't know why I'm tellin' you this," she sniffled, reaching to take his hand in hers. "But after what you just said, I feel compelled to. Tom, I've admired you greatly, ever since we left St. Louis. I know I haven't confused it. I know that I've been silly, and a nuisance. I've been confused, but now I think I understand, and I must speak my heart to you. All these weeks on the trail together, long days of dust and thirst and the ever-present danger of Indians, and these cold nights when the wolves howl and the moon lights up the emptiness of the lonely prairie, all the long, hard weeks since we left St. Louis, Tom, I've believed that I was in love with you. And the thing I realize now is that I'm not. I admire you too greatly for that. To love you would only be to tie you down. You've got a great work in front of you, Tom. Ginsberg, a great role to fill on behalf of all the people who are to follow you west to help build the new world of freedom and opportunity you spoke of. It's not people like me who keep alive the promise of the westward movement, Tom. It's people like you. You've got dragons to slay, great heroic deeds to perform. I know that now. And knowing it somehow fills me with the deepest peace I've ever known."

The wagon master didn't know what to say. He just sat there scratching in the dirt with his stick. Finally he reached over and shook hands with the lady wagon driver. Then he went over to the chuckwagon and told the cook to fix her a buffalo steak.

## WELCOME TO WESTERN COUNTRY

"Welcome to Western Country," said a fog in a cowboy suit as he held up a package of cigarettes. "Welcome to the dream, fresh taste of the great outdoors." As the fog took a Western out of the package and lit it, the camera pulled away to show a bunch of guys branding calves and generally horsing around the corral. Then the camera closed in on the fog again as he took a deep drag on his Western. He filled his lungs, and then without exhaling he seemed to fill his lungs again. Two, five, ten seconds and more went by and still he didn't exhale. As his face turned blue and his eyes began to bulge he looked straight at Divine Right and grinned. D.R. laughed and gave him the V-sign. At the last he blew the smoke out and holding up the cigarettes one more time he said, "Won't you have a Western?"

"Thanks," said D.R. "But I just had one." Laughing, Estelle said "Then Westerns is all right cigarettes." The cigarette commercial was followed by one about Stud pickup trucks. The picture showed a new Stud pickup rolling across the prairie chased by a herd of wild mustangs. A closeup of the Stud pickup's front suspension absorbed the shock of the rocks and holes while the passengers rode in total comfort.

(continued)



## Seeds, Vegetable and Fruit

*Mr. Stout swears by Harris' "wonderful" Sweet Corn. Mr. P.N. Shrup raves over Burpee's "Big Boy" tomato. There's a good many seeds and companies to develop your own opinions among. Send 25¢ for the catalogs.*

### CORN

5 lb. Minimum Order

**Barbecue**—A midseason early, high quality hybrid for home garden or market use. Ear 8½" long with 12-14 rows, well filled with excellent husk protection.

Per lb. Thick Kernels  
5 lbs. 65¢ 25 lbs. 55¢ 100 lbs. 51¢  
500 lbs. 49¢

Per lb. Flat Kernels  
5 lbs. 68¢ 25 lbs. 58¢ 100 lbs. 54¢  
500 lbs. 52¢

**Butter & Sugar** (78 days)  
Per lb. Thick Kernels  
5 lbs. 83¢ 25 lbs. 73¢ 100 lbs. 69¢  
500 lbs. 67¢

Per lb. Flat Kernels  
5 lbs. 86¢ 25 lbs. 76¢ 100 lbs. 72¢  
500 lbs. 70¢

Herbst Bros.

### 6123 Burpee's Big Boy Giant Hybrid

78 days. A heavy producer and the largest of our hybrid tomatoes. Many weigh 1 lb. and more, some 2 lbs. and more. Unlike other large fruited varieties, Big Boy is perfectly smooth, deep globe to deep oblate in shape and very firm. Fruit is scarlet-red with thick walls and bright red, meaty flesh of fine flavor.

Pkt. (30 seeds) 50¢; 2 pkts. 95¢  
5 pkts. \$1.35; 1/2 ct. \$2.25

## GOURDS

Your  
Choice  
Any  
4  
Pkts.  
of  
Gourds  
\$1.75



## Ornamental and Useful ORNAMENTAL FOR TABLE DECORATION

**Gourds.** The various types of gourds make very interesting annual climbers which rapidly cover fences, trellises, or any unsightly objects which one might wish to obscure from view. The ornamental fruits which they bear are very attractive, many of which make delightful toys for children.

	Pkt.	Oz.
426 Shumway's Finest Mixed	60 cts.	\$1.75
427 Dipper	60 cts.	\$1.75
428 Sugar Trough	60 cts.	\$1.75
429 Nest Egg	60 cts.	\$1.75
430 Hercules Club	60 cts.	\$1.90
431 Calabash	60 cts.	\$1.75
432 Dish Cloth or Vine Oria, edible pods	60 cts.	\$1.75
435 Vegetable Gourd, Ornamental and Edible	60 cts.	\$1.75

## VEGETABLE OR EDIBLE SOY BEAN, BUSH

90 days for use as green shelled beans. The plants are erect, bush-like and literally loaded with pods, each containing 2 or 3 oval-shaped, bright green beans which are delicious cooked as green shelled beans. When fully matured, the dried beans are nearly round, green and may be cooked like lima beans.

Pkt. 35¢; 1b. \$1.50  
Natural Development



145 Harris' WONDERFUL Sweet Corn

A special experience in good eating. Wonderful's sweetness, flavor and tenderness are second to none. It ripens in mid-season, yielding abundantly over a considerable period. Long tapered ears with 12-18 rows of perfectly delicious, creamy golden kernels. Our customers named it their "happy prize".  
Pkt. 45¢; 1/2 lb. 95¢; 1 lb. \$1.05; 5 lbs. \$5.75; 10 lbs. \$9.00.

Burpee is the biggest, fastest and most efficient of the seed catalogs. Send for the catalog in January or August (they're always out of them by April). Burpee designates some seeds for certain areas, which is handy.

W. Atlee Burpee Co.  
Riverside, CA 92502

**Natural Development Company** has Lloyd Kahn's recommendation as best source of seeds. They also carry organic fertilizers and insecticides. Prices like Burpee.

Natural Development Company  
Bainbridge, Pennsylvania 17502

Vita Green has seeds that are "untreated, natural, old-fashioned, unhybridized, uncrossed". The founder is moving to cleaner land in Australia, but the business will keep going.

Vita Green Farms  
P.O. Box 878  
Vista, CA 92083

Shumway deals particularly in bulk seed, has somewhat lower prices and nice engravings in its catalog.

R. H. Shumway Seedman  
P.O. Box 777  
Rockford, IL 61101

Gurney has the best seed and tree guarantees. More cold climate seeds.

Gurney Seed & Nursery Co.  
Yankton, South Dakota 57078

Harris seems like Abercrombie & Fitch, dignified, good quality, not cheap.

Joseph Harris Co.  
Moreton Farm  
Rochester, N.Y. 17624

Stokes has a large catalog, similar to Burpee.

Stokes Seed, Inc.  
Box 15, Elliott St. Station  
Buffalo, N.Y. 17205

Rohrer's has low prices, will send untreated seeds, if you ask.

P. L. Rohrer & Bro. Inc.  
Smoketown, Pennsylvania 15756

Field's has a big catalog with low prices.

Henry Field Seed & Nursery  
Shenandoah, Iowa 51601

De Giorgi's is 'organically oriented', has a plain catalog and low prices.

De Giorgi Co.  
Council Bluffs, Iowa 51501

Olds is cheaper than Burpee and Shumway, more expensive than Fields.

L. L. Olds Seed Company  
P.O. Box 1069  
Madison, Wisconsin 53701

Park is recommended by some of the organic gardeners.

George W. Park Seed Co.  
Greenwood, South Carolina 29646

Herbst is a catalog for professional growers. Good prices, no pictures, minimum order \$25. Vegetables, flowers, shrubs, trees, and grass.

Herbst Brothers  
1000 N. Main St.  
Brewster, N.Y. 10509

Farmer looks like another catalog.

Farmer Seed & Nursery Co.  
Fairbault, Minnesota 55021

Stark Brothers is an excellent source for fruit trees, dwarf, semi-dwarf, and regular. 150-year-old nursery. Leaning organically.

Stark Brothers' Nurseries and Orchards  
Louisiana, Missouri 63353

Miller also has fruit and nut trees.

J. E. Miller Nurseries  
Canandaigua, N.Y. 14424

Kitazawa is a supplier of oriental seeds such as Chinese cabbage, Japanese onion, edible burdock, etc.

Kitazawa Seed Co.  
3 A66 W. Taylor St.  
San Jose, California 95110

Seeds are exquisitely designed instruction capsules for an orderly rearrangement of the elements. The gardener plays out a small role in the process—the seed tells the soil nutrients, air and water to organize into exactly what is described on the seed packet. Automation—and an example of what we've been given to work with on our planet.

—Lloyd Kahn

a seed is a little plant in a box with its lunch.

write to these addresses for free catalogs and brochures.

—jd

This is the Year to FIGHT INFLATION and the HIGH COST OF LIVING. GROW YOUR OWN VEGETABLES WITH A GURNEY GARDEN.

### A SUGGESTED GARDEN PLAN



Gurney



Shumway

### 492 Oak Leaf

Improved strains of an old favorite loose leaf variety. Form a tight bunch of medium green leaves which are deeply lobed. Very tender, long standing and of excellent quality. Pkt. 40 cts.; 1/2 lb. \$3.00; postpaid.



Shumway

### Vegetables for Survival

Clyde Robins now offers a "Survival Garden" — especially long lived seeds vacuum-sealed in a can for use in emergencies, etc. The catalog describes:

After special treatment to prolong their life and their power to germinate with vigor, these superior seeds were immediately deposited in this sanitary container. Here they add vigor remains and their life span is greatly increased as they lie unmolested, figuratively, "Out of This World," ready to produce abundantly when the can is opened.

Seeds sealed by our method have been found very good after more than ten years. Our experience with them only goes this far.

Sealed in this container are:

4 oz. Beans	4 oz. Peas
1 1/4 oz. Beets	1 1/2 oz. Spinach
1 1/2 oz. Cabbage	1 1/2 oz. Squash
1 1/2 oz. Carrot	1 1/2 oz. Eastern Tomato
4 oz. Corn	1 1/2 oz. Western Tomato
1 1/2 oz. Onion	

Complete instructions for planting are included.

Enough seed to feed a small colony the essential vegetables for survival are contained in this can.

... Shipped anywhere in the United States ... \$3.25

from:  
Clyde Robins  
P.O. Box 2081  
Castro Valley, CA 94546

## Trees & Flowers

Clyde Robin

**Wildflower & Wild Tree Seeds.** Gardeners and food growers—and maybe hunters and gatherers too—should check out Clyde Robin's seed catalog. It offers not only wildflowers, which grow easily without too much attention, but also many weird and unusual seeds of flowers, trees, shrubs, herbs, and vegetables, plus occasional information on their culture, appearance, uses, etc.

The **Special Roadside Mixture** grows in places where you thought only weeds would, and makes a really juicy growth in early Summer. After it has bloomed you can cut it all down to the ground and the California poppies grow back and flower again. Grow catnip and turn your cats on—it grows easily from seed but you have to start the seedlings inside a small protective wire cage (which the plants will grow up through and out of) otherwise those dope-depraved cats rub out the young plants entirely.

[Suggested and Reviewed by David Noton]

Catalog

\$5.50

from:  
Clyde Robin  
P.O. Box 2081  
Cestro Valley, Ca. 94546

**Schumacher** is a catalog for professional nurserymen and foresters, but don't be shy. If you know the Latin name of the tree you're after, you can find a good deal in this catalog.

—SB  
[Suggested by Carnegie Schensted]

F. W. Schumacher  
Sandwich, Mass. 02563

California tree seeds available from:

R. S. Adams  
P.O. Box 561  
Davis, CA 95616

Gardens of the Blue Ridge is a pretty catalog of eastern U.S. wildflowers, trees, shrubs, and bulbs.

Gardens of the Blue Ridge  
Ashford, N.C. 28603

The 3 Laurels has a smaller catalog of wild flowering plants:

The Three Laurels  
Marshall, N.C. 28753

California wildflowers also from:

Theodore Payson Foundation  
10459 Turford St.  
Sun Valley, CA 91352

You can buy a forest, or all kinds of trees from:

Musser Forests Inc.  
Indiana, Pa. 15071

Lilies and Lotuses

TUB GARDEN

The Van Ness Water Gardens carries a wonderful selection of Water Lilies—both hardy and tropical and also the sacred Lotus—they will send you 24 color photos and a detailed description of each beautiful pictures and descriptions of the lilies and lotus they offer. Also in this catalog you will find complete instructions on growing lilies, their requirements and information also on building big ponds—erect them—planting and natural balance of a pond. They also tell many beautiful goldfish—water plants and snails. There is a list of helpful books in there also!

In my limited dealing with them they have been very nice to me and very pleasant to deal with. You can visit the Gardens on Thurs. Fri. Sat. only between 8:00AM-5:00PM—the other days are closed because of packing and shipping because they ship all over the world. Address of Water Gardens—

Van Ness Water Gardens  
2460 N. Euclid Avenue  
Upland, California 91786

They also are familiar with the organic growing method and practice it also.  
Having a frog pond gives such joy and serenity! Visiting the Zen Temple in Kyoto gave such an indescribable feeling especially the peaceful pond! I hope this information opens new experiences for people.

Paul & Toni Goldensberg  
La Habra Heights, CA



"The Stud," said an unseen baritone. "Everybody wants one." The Lone Outdoorsman asked Divine Right if his VW had independent front-end suspension. D.R. said he didn't know. "It's a good thing to have if you're going to do any cross-country driving."

"I guess it is," said D.R. "We're driving cross-country," said Estelle. The Outdoorsman turned and looked at her. He was on his own, looking for some ketchup on a cement near the TV set. "No kidding? You all drive around in the boonies?"

"No," said Estelle. "We stay on the highway. But we're driving across the country." "I've driven across the country fourteen times in the last two years," said D.R.

"Oh," said the Outdoorsman. "That's not what I mean. I mean out in the boonies, where you'd take a trail-bike, or something. You know. Cross-country."

Divine Right asked the Outdoorsman if he'd ever driven across the country. "Well now," said the Outdoorsman. "Do you mean cross-country, or across the country?"

"I mean across America," said D.R. "The nation, in other words," said the Outdoorsman. "But the nation is the country," said Estelle.



Pine, Cypress, Fir, Redwoods, Eucalyptus

**Davis Headquarters Forest Nursery, Rte. 1, Box 1410, Davis, California 95616.** The state of California's distribution center for reforestation, erosion, windbreaks. A long form of course, but they mail pine, cypress, fir, redwoods, eucalyptus in quantities of 100, 1,000 or more. One year old bare-root trees (4-10" height) are as little as \$10 per 500.

Growing Wildflowers

I might point out that the growing of desirable wildflowers involves a great deal more than turning them loose. If you live in suburbania the idiot who built the place dug the topsoil out to form your basement and then thoughtfully graded the subsoil over top of the existing topsoil. You can remedy this as I did by "digging the soil up two feet down," and throwing it out. Replace this with leaf-mold soil from the nearest woods, add a ton of peat moss, the contents of your compost pile, and some well-manured soil from your vegetable patch and you're all set to go, provided you have adequate shade and moisture. Also since chlorine and fluoride are fatal to native orchids, obtain water from a non-polluted source. Do this and you will grow lovely lilyspillers, trailing arbutus, milkmaids, white hare bells, and so on.

I do not recommend growing wildflowers from seed to the beginner, unless the species is otherwise unobtainable, is a biennial or annual, or is grown rather easily. It is a lot easier to collect a few specimens from your locality, and obtain desirable plants which do not grow in your area from dealers. A plant which will not survive transplant when in bloom will tell you almost at once about its future. New place little flag on the plants you want and come back later. New plants will soon replace what you have collected if you dig in the soil. If you take no more than a couple plants the station is safe till the bulldozer arrives, and a collection of wildflowers in cultivation can collect the wild following degradation. I wonder if anyone would care to engage in a plant exchange, agricultural regulations notwithstanding.

The very best wildflower dealer I know of is Mr. Paul Lesar, 30 Summer Street, Methuen, Mass. He has obtained his entire stock by growing it from seed, without removing one specimen from the plants which is more than I can say for myself. He also digs his plants from the ground the day he orders them, and sends them in some other use storage facilities. He is also more knowledgeable than most professional planters in his work than some others. Catalogs are good (and less expensive) sources of plants at C. Robbins' Gardens of the Blue Ridge, Ashford, N.C. and the Van Ness Water Gardens, Upland, California. Although many of their plants are nursery-grown, both of these dealers sell plants collected directly from the wild. Catalog free.

There are three firms which might be of interest to you because they offer plants which are simply not obtainable in the U.S. I recommend Sutton & Sons, Limited, Reading, England for vegetable seeds; Thompson and Morgan, Ipswich, Ltd., Ipswich, England for flower seeds; and C. J. van Tubergen, n.v., Zaanenburger Nieuwpoort, Box 116, Koningsweg 86, Haarlem, Holland, for bulbs. The last-mentioned are wholesalers, and charge 30% extra on orders under \$100. Also don't let them aim something which doesn't need it, and place your order well in advance. You will obtain superior bulbs by ordering from them, however. I wish some people in New Mexico would get together and grow their *Oenothera* and *Regelia* series of this species; they are of unique beauty but require a lot, dry summer I cannot provide.

All three offer free catalogues.

Donald Hackenberry  
Redlands, Pa.

The Outdoorsman wrinkled his brow and thought about that as he sprang ketchup on the remnants of his steak. "The nation is America," he said. "What the country is all the land, and the rivers and things."

D.R. had stopped eating altogether. Leaning toward the Outdoorsman, and emphasizing with his fork, he said, "Do you mean you don't think America and the country are the same thing?"

"Of course not," said the Outdoorsman. "Ain't you ever read any history?"

"I've read history," said Estelle. The Lone Outdoorsman swallowed some more steak and went on as if Estelle hadn't said anything. "Now you take these people on the wagon train."

"Right," said D.R. "Okay," they're traveling across the country, but they're not traveling across America. Because the country where they're traveling hasn't been taken into the nation. If you see what I mean. There's no statehood there on the plains yet, therefore that country they're in isn't part of America. Now if where they are was Kansas, or Kansas, or South Dakota, or Nebraska, then they're traveling across America. But since they're not, why then they're traveling cross-country."

"So when the people on Westward, Westward are not traveling in America, but just traveling in the country, because America and the country are two different things."

"Something like that, America, you see, is yet to come on Westward, Westward. Of course now it has come, Westward, Westward's just a story, don't you see. It's about something that's been over a long time. I mean, the westward movement is something my grandfather helped do. Him and the others took the country, and turned it into America. If you see what I mean."

"Well, I don't, actually," said Divine Right. The Lone Outdoorsman chewed the last of his steak, and sipped up the gravy with a piece of bread. "If you see what I mean," he said. "You're young yet. You will one of these days."

TOM GINSBERG'S I CHING

By the time the Outdoorsman and his guests had finished their steaks and cleaned the table off for dessert, the wagon train had been surrounded by about a thousand Indians, and Tom Ginsberg had been wounded twice. He could still shoot a pistol but the lady wagon driver had to load for him. She loaded while he shot and he shot while she loaded, and the bodies made a little border around the circled wagons. Now and then the camera panned around the circle and showed other people firing at the Indians. But it was clear that the outcome of the battle really depended on how well Tom and his guests could stand up with their guns. And in spite of the stack of bodies beyond the wagons, you could tell by the desperate expressions on their faces that the Indians didn't think they were doing very well.

"Poor old Tom looks sort of underdog, don't he?" said the Outdoorsman.

Estelle laughed. "Maybe he ought to throw the I Ching," she said.

D.R. leaped to his feet. "Perfect!" he yelled. "Perfect!" The Outdoorsman asked what was perfect but D.R. was moving too fast to answer. He bolted past Estelle, stumbled out of the camper and ran through the dirt to his own campsite where Urge was patiently waiting. Half a minute later he was back in the Outdoorsman's camper, carrying his battered, leather-covered copy of the I Ching.

"What are you doing?" asked the Outdoorsman.

"We're throwing Tom Ginsberg's I Ching," said D.R.

"What's in I Ching?"

"Never mind," said D.R. "Just toss these coins."

Quickly they tossed the coins, two times each, and Estelle read the hexagram.

Obstruction.

Tom said, "Uh oh," and D.R. "It looks heavy."

Indeed it did. Nearly everybody in the wagon train was dead except Tom and the lady. Indians had penetrated the inner circle and were slaughtering the survivors, folks while still other Indians battled the remaining survivors.

D.R. began to read Tom's I Ching aloud: "The hexagram pictures a dangerous abyss lying before us and a steep, inaccessible mountain rising behind us. We are surrounded by obstacles."

As D.R. said that, an arrow pierced the lady wagon driver's heart.

"Difficulties and obstructions throw me back upon myself," D.R. went on. "While the inferior men seeks to put the blame on other persons, bewailing his fate, the superior man seeks the error within himself, and through this introspection the external obstacle becomes himself an occasion for inner enrichment and education."

The screen was filled with the face of a hideous savage, advancing on Tom with tomahawk in hand. Tom looked at him with his pistol but instantly two more savages appeared, armed with knives and tomahawks.

"What do these mean?" Tom asked. D.R. read, "One should not strive blindly to go ahead, for this only leads to complication. The correct thing is, on the contrary, to retreat for the time being, not in order to give up the struggle but to await the right moment for action."

"Retreat, hell!" shouted the Outdoorsman. "Stand your ground, Tom. Die with your goddamn boots on!"

The screen closed. Tom's face was in the spots of the blood oozing from the gash in his forehead his eyes blazing with courage and determination. Gritting his teeth, Tom struggled to get to his feet. Leaning against the wagon wheel, his left arm dangling useless at his side, Tom raised his right arm and pointed his pistol at the advancing Indians. Then he disappeared and was replaced on the screen by fifteen Dalmatian pups poring themselves on Fido Dog Food.

Trees & Flowers  
Land Use

57



I would like to turn people on to herbs. You can grow herbs in the corner of your vegetable garden, in a patio box, in a window, in a greenhouse, in a flowerpot. You can be as impractical as you wish. A few square feet of ground and prepare yourself for that land you ultimately hope to gain part or all your livelihood from. You can use your herbs for flavoring cooking, for salads, for making other small nice, for drying cloth, for curing yourself of all sorts of ills, for making magic and casting spells, for alchemy. And herbs are beautiful, simple plants, most of which grow and thrive even in the poorest soil. You can even grow your own I Ching yarrow stalks.

I haven't investigated many herb books as yet; maybe some of the older readers can recommend some good ones; anyway, better to start with the herbs and get to the books later. One interesting one for me is **NATURE'S MEDICINES**—The Folklore, Pharmacology, and Value of Herbal Remedies really binds down a lot of lore. Another good one is **HANDBOOK ON HERBS** published by the Brooklyn Botanical Garden, Brooklyn, N.Y., which is enough to get you hooked on herbs all by itself. The Brooklyn Botanical Garden, by the way, publishes a wonderful book of books on all phases of gardening, all of which sell for either \$1.00 or \$1.50 (the herb one is \$1.00) Free list available from them.

As an example of herb lore, someone told me that when he gets a bed case of poison oak, he uses a leaf of comfrey to rub on with, rubbing it freely over the itchy spot, and wipes out the poison oak in a few days. However, he says, if you use a comfrey poultice on an infection or wound, don't bind the leaf directly to the skin, as it's so effective in promoting the growth of epithelial cells that it may actually grow to the skin. The *Nature's Medicines* book has a lot more up on comfrey.

A problem with growing herbs is that there are seldom more than a few of the most common types in the local nursery. So I talked to some who are really into herbs, spices, gardening, essential oils, gourd, and all that useful vegetable stuff, and asked her where to get her herbs. She said she had a list of addresses, I sent her their catalog, and the following is all about that.

**Nature's Herb Co.**, 281 Ellis St., San Francisco, Calif. They sell dried herbs and spices by the pound, ingredients for potpourris and sachets, prepared herbal remedies, and essential oils. Various herbal tea mixtures for both enjoyment and medicine.

**Herb Products Co.**, 11012 Magnolia Blvd., North Hollywood, Calif. 91606. They sell herbs at the above, with the addition of some of the most interesting herbs, spices, gardening, essential oils, gourd, and all that useful vegetable stuff, and asked her where to get her herbs. She said she had a list of addresses, I sent her their catalog, and the following is all about that.

**Indiana Botanic Garden, Inc.**, Hammond, Indiana 46325. They will send you a very far-out catalog and an herbists' almanac, which will tell you the best days to plant, what the weather will be like for all of 1983, and other useful tidbits. They sell tea, medicines, herbs and spices, seeds, beans, nuts, gum, resin, oils, vitamins, cosmetics, perfumes, formulas to cure liquor addiction, tobacco habit, and tobacco craving, and tell you what grows well with what.

**Tradehands Candle Shop**, 12244 Fillmore Street, San Francisco, Calif. I throw this in just for the hell of it. They sell candles, but their scene is magic. I was last there several years ago, and it appeared to be an old established business, run by an elderly white-haired man who looked like a Santa Claus figure. But his wife, who looked like a Haitian voodoo lady. They sell the usual oils, powders, etc., but I think they may also handle other things they don't list in their catalog. They will also give intelligent advice on how to change your luck, make money, make your love love you, etc. They make no no-nonsense claims, but will answer questions. I tried them once, and their advice worked, but I don't think I'd do it again. Handle at your own risk.

None of the above deal in things for gardening.

**Meadowbrook Herb Garden**, Wyoming, Rhode Island 02898. Their catalog is a beautiful piece of printing and calligraphy. They don't ship live plants, but will deliver if you live within forty miles. They sell herb seeds, and herbs, spices, seeds, lotteries, books, supplies, and miscellany. They seem to be into Anthroposophy and something called Bio-Dynamics.

**Carl Odom**, Pinola, Mississippi 39143. He will send you a very down-home two-sheet catalog on request, telling you all the growing things you can do with gourds. I won't say anything about it and run it for you. He also sells vegetable and flower seeds.

**Nichols Garden Nursery**, 1100 Pacific Hwy., Albany, Oregon 97321. They will send you an incredible 44-page catalog that will require every ounce of your willpower to keep you from making a hundred dollar order on the spot. Seeds for vegetables and herbs, growing plants, dried herbs and spices, mushroom spores, wild-flower seeds, house plants, gourd seeds, books, supplies, brewing and winemaking stuff, and all sorts of other goodies. They specialize in the unusual, like very large, very tasty, or very different vegetables. Their catalog is micrographed because, they say, "modern high speed presses could probably do the job better, but we believe that people are more important than machines, and for that reason will continue to resist automation." I bought some live plants from them, they arrived in good condition and are now growing well.

**Woodland Acres Nursery**, Croix, Wisconsin 54114. They specialize in wildflowers and ferns, many of which have herbal uses, and sell mostly live plants.

**Greene Herb Garden**, Greene, Rhode Island. Getting their catalog is like heaven from your nice aunt that lives in the country. Full of news about their family, spring in New England, and gentle conversation about herbs. They sell only herb seeds and bulbs.

**Vita Green Farms, P.O. Box 878, Vita, California 92083.** They sell vegetable and herb seeds, and herbs, spices, seeds, lotteries, books, supplies, and miscellany. They seem to be into Anthroposophy and something called Bio-Dynamics.

**Walnut Acres, Penns Creek, Pennsylvania 17862.** They sell nothing for the garden, but the most complete selection of organic food and related products I've ever seen, including every conceivable organic grain. Prices are high, but they have all sorts of stuff I've never seen before. They seem to be very into organic food, people who love and are concerned about the world around them.

That's all for now. I'll keep in touch. Keep up the good work.

Love,

Roland

## A Modern Herbal

This is far and away the most complete (and expensive) information on herbs.

"The medicinal, culinary, cosmetic and economic properties, cultivation and folk-lore of herbs, grasses, fungi, shrubs and trees with all their modern scientific uses..."

Over 1600 plants are listed—the history, description, constituents, medicinal preparation, dosages, and even recipes of each.

It is a two-volume set, with a meticulously complete index of the common names of the plants, followed by a service index of Latin binomials.

(Reviewed by Alan Schmidt)

Comfrey leaves are of much value as an external remedy, both in the form of fomentations, for sprains, swellings and bruises, and as a poultice, to severe cuts, to promote suppuration of boils and abscesses, and gangrenous and ill-conditioned ulcers. The whole plant, beaten to a cataplasm and applied hot as a poultice, has always been deemed excellent for soothing pain in any tender, inflamed or suppurating part. It was formerly applied to raw, indolent ulcers as a glutinous astringent. It is useful in any kind of inflammatory swelling.

... The reputation of Comfrey as a vulnerary has been considered partly to the fact of its reducing the swollen parts in the immediate neighborhood of fractures, causing union to the place with greater facility.

## The Herb Grower

A quarterly for grow-your-own herbals with articles by same, plus herb prints, recipes, herb history and book reviews

—HH

## The Herb Grower

\$5.00 per year (quarterly)

from:  
The Herb Grower  
Falls Village, Connecticut 06031

## Stalking the Heathful Herbs

Euell Gibbons (more on p. 82) has maximum information on finding herbs, and cheerfulness to match.

—SB

## Stalking the Heathful Herbs

Euell Gibbons  
1986; 295 pp.

\$2.95 postpaid

from:  
McKay Company, Inc.  
750 Third Ave.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG



GINSENG

## Nichols Herb & Rare Seeds

Nichols and his wife who seem to have just popped out of the Black Forest. The whole place is one room of cardboard boxes and pigeon holes walled and odd notes tacked up all over the place. He is basically a mail order business and sells wine making supplies, beer making supplies (and ingredients) and rare seeds and herbs and plants and all sorts of weird stuff. He also printed his own recipe book which is fantastic for sourdough stuff, wine & beer making, and baking with malt sprout and hops also lots of recipes for yeast.

They are really beautiful old souls who send you home with extra goodies that you are to try and accept as gifts.

Needless to say—they're organic. They have a fairly complete catalog that they will send and their seeds really are superior.

(Reviewed by Mrs. E. E. Sturdevant)

Nichols Garden Nursery  
1190 N. Pacific Hwy.  
Albany, Oregon 97321

## A Modern Herbal

Mrs. M. Grieve, F.R.H.S.  
1931... 1967; 2 vols. 888 pp.

\$29.50 postpaid



from:  
Hearst Publishing Co., Inc.  
31 Eater 10th Street  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

## Nettle.

It is a strange fact that the juice of the Nettle proves an antidote for its own sting, and being applied will afford instant relief.

From a culinary point of view the Nettle has an old reputation. It is one of the few wild plants still gathered each spring by country folk for a pot-herb. It makes a healthy vegetable, easy of digestion.

The young tops should be gathered when 6 to 8 inches high. Gloves should be worn to protect the hands when picking them. They should be washed in running water with a stick and then put into a saucepan, dripping, without any added water, and cooked with the lid on for about 20 minutes ... they thus form a refreshing dish of spring greens, which is slightly laxative. In autumn, however, Nettles are hurtful, the leaves being gritty from the abundance of crystals they contain.

An efficient hair tonic can be prepared from the Nettles: simmer a handful of young Nettles in a quart of water for 2 hours, strain and bottle when cold. Well saturate the scalp with the lotion every other night. This prevents the hair falling and renders it softer and glossy.

## Some more herb suppliers:

Rocky Hollow Herb Farm

Lake Walkill Rd.

Box 100, New Jersey

\$64 for catalog

Capland's Herb Farm

Silver St.

Conventry, Connecticut 06238

Mail Box Seeds

Shirley Morgan

2042 Enclaw Ave.

Alameda, California 94501

herb seeds

Greene Herb Gardens

Greene, Rhode Island 02827

Common and rare herbs and herb seeds. From Borage and Chervil to Lovage, Sweet Cicely and Wood. Seed packets, three for \$1.00. Brochure.

Meadowbrook Herb Garden

Wyoming, Rhode Island 02898

Organically grown herbs and seeds. Teas, seaweed meal and herb books.

Oak Ridge Herb Farm

R.F. #1, Box 461

Alton, Illinois 62002

A also completely organic. Rare herb seeds, plants, roots and bulbs. Teas. Free catalog.

Northwestern Processing Company

217 North Broadway

Milwaukee, Wisconsin 53202

A young company just getting into the mail order business. High quality spices, reasonable prices, coffees, teas, nuts, and herbs. They'll do their best to get rare herbs and products you can't find anywhere else. They also have a wholesale outlet, Kettle Creek Company. Free catalog.

Dominion Herb Distributors, Inc.

61 Saint Catherine Street West

Montreal 129, Quebec CANADA

Besides being an excellent source of plants for dyes (see p. 88) they stock over 2000 different herbs, roots, barks, gums, berries and seeds. Canadian-grown Ginseng Root. Free catalog.

D. Napier & Sons

17, 18 Bristol Place

& 1 Teviot Place

Edinburgh EH1, SCOTLAND

Low low prices and some unusual herbs and herb products, like Barbary bark powder, Dandelion coffee, Slippery Elm Bark Soap and Unicorn Root Powder. Free brochure.

(Suggested by Dr. Duncan Pepper)

## Growhole

A Growhole is a big hotbed. You cut a level trench back into a south-facing slope, cover it with two layers of clear vinyl, and grow vegetables all winter. A poster describing all this by Steve Baer, Fay Charoudi, and Steve Durkee costs 25¢ from:

Lama Cookbook Fund  
Box 422  
Corrales, New Mexico 87048

—SB



INTERIOR DURING 1st PLANTING

## Inflated Plastic Greenhouses

Inflated plastic greenhouses have been built, costing only about 15 cents per square foot, near the fishing community of Puerto Penasco on the Gulf of California. This location provides bright and plentiful sunlight almost every day of the year, so that this is coupled with almost a complete absence of fresh water. The enclosed plants are grown in an atmosphere of approximately 100 per cent relative humidity and 1,000 ppm. of carbon dioxide (the normal outdoor figure is 300), thereby reducing the water requirements to 1 to 5 per cent of normal. The unlimited sea water is used for cooling in the summer and heating in the winter. (The direction in which such schemes may go in the future is described in another article in this issue by Edward A. Mason.)

"Food Supply: The Fruits of Research"  
Sylvan H. Wittwar  
Technology Review, March 69

TECHNOLOGY REVIEW  
Room E19-430  
MIT  
Cambridge, Mass. 02139

\$1.00 per copy  
\$7.50 per year  
\$8.00 Canada & foreign countries

## Indoor Greenery

For those who are still in the city but are attempting an indoor green revolution to freshen air, eyes and soul, may I suggest the following sources of info., plants and materials:

The really best book on "how to" is Ernest Drucker Ballard's *A Garden in Your House*, Harper & Row. An excellent & unusual feature of this book is that it contains lists of plants especially suited to specific indoor environments.

Indoor plants by mail:

Loper's Greenhouses, Danielson, Conn.  
These are really groovy & unusual plants from one of the best greenhouse complexes in the U.S. It's worth a visit if you're anywhere near NYC—NJ side of Lincoln Tunnel on Patterson Ave.

Merry Gardens, Camden Maine 04843  
Handbook & price list \$5.00. Gives cultural requirements for each plant or plant type. Offers a wide variety of plants—and specially wide variety of fuschias, begonias, scented geraniums and herbs. They also sell herb seeds.

Julius Roehrs Co., Rutherford, N.J. 07070  
Exotic Plant Collectors list \$2.25

These are really groovy & unusual plants from one of the best greenhouse complexes in the U.S. It's worth a visit if you're anywhere near NYC—NJ side of Lincoln Tunnel on Patterson Ave. This is the only source of "specimen size" plants by mail I know of. Most deal in plants in 2"-3" pots which are easiest to ship—and relatively inexpensive to acquire.

Materials & supplies—particularly for growing things under lights  
House Plant Corner  
PO Box 810  
Oxford, Maryland 21654  
Catalog \$2.00 the 1st time.

Peace & Strength  
Libby J. Goldstein  
Philadelphia, PA

## Algae

In notice in your September 1970 #1 WEC, p. 17, you refer to some algae production experiments. Ideas of this sort have been around for quite a while. Most of them date back to Yencus Back, who proposed in the mid-1940's that the U.S. should "grow algae and eat the world." In 1953, the Carnegie Institution of Washington, D.C. issued their Publication No. 800, "Algal Culture From Laboratory to Plant." This book has been reprinted several times, and costs about \$5.00. The Japanese microbiologists have also been very active in this field. There is a French company researching the area, but they regard both their organism and their process as proprietary, and refuse to release any detailed information (a violation of scientific etiquette). However, the real use is in this business at present are the Czechs. In the Annual Reports of the Laboratory of Algaeology of the Institute of Microbiology of the Czechoslovak Academy of Science for 1966, 67, 68, 69, and 70, at Brno, Czechoslovakia, they describe a method of producing large quantities of algae, outdoors, using natural illumination plus artificial nutrients and pumping facilities. The clever adaptation, not previously used so far as I know, is that they let the algal suspension flow down over large inclined glass plates with interposed barriers to increase flow turbulence and promote mixing. Thus the algae are exposed to sunlight. In the winter, when it gets cold they shut down the algae operation and use the sludge of plants at the top of a greenhouse, and grow ordinary plants inside the space used in summer for pumping and storage. These Annual Reports were free at last notice, but they budget is minimal and people shouldn't request them unless they can really use them. Much of the information is detailed and highly technical, not to be skimmed over in a weekend.

Pat Patterson  
Austin, Texas

## Hydroponics

growing things without soil . . .  
remember the avocado pit suspended on four toothpicks over the glass of water on the top of the refrigerator? or half a potato scumming away in some dark corner? that all has a name, here's a complete set of short booklets on hydroponics.

—JD

Hydroponics is the opposite of Land Use. Ever since Skinner's Walden Two it's been with us in the pop culture as some kind of solution to things. And if you're living in a Soler city, or floating Fullerton, or mountaintop, or moon, it might well be.

—SB

## Soilless Culture

T. Saubay  
1993; 104 pp.

\$4.95 postpaid

from:  
Transatlantic Arts, Inc.  
North Village Green  
Levittown, N.Y. 11756



Hydroculture, inc.



SOLUTION

A simple method for growing plants in solution.

## Hydroponics supplies, chemicals, hardware, information from:

Hydroculture, Inc.  
P.O. Box 1695  
Glendale, Arizona 85301

Hydroponic Chemical Co.  
Copley, Ohio 44321

The Hydroponics Company  
P.O. Box 191  
Little Rock, Arkansas 72203

Hydroponics Corp. of America  
745 5th Ave.  
New York, N.Y. 10022

J. W. Davis Co.  
Box 768  
Bettendorf, Iowa 52222

Fiegler Hydroponics  
3236 W. Flagler St.  
Miami, Florida 33130

Kelley Clark, Inc.  
411 North Lincoln  
Lowland, CA 90537

Pen American Hydroponics, Inc.  
Dallas, Texas 75200

## Hydroponic Culture of Vegetable Crops

M.E. Marvel

free [Suggested by James J. Berryhill]

from:  
University of Illinois  
College of Agriculture  
Extension Service in Agriculture  
and Home Economics  
Urbana, Illinois 61801



Fig. 3—One type of small home unit suitable for use by amateurs.



DEPARTURE

If D.R. had done what he wanted to do right then he would have leaped across the table and turned the television off.

If he had done that, and the Outdoorsman had then done what he wanted to do, he would have leaped across and turned the TV on again, which very likely would have resulted in an argument between him and D.R. about the difference between stupidity and heroism.

If there's to be a fight, D.R. reasoned, the courageous thing is to retreat before it begins, as the Ching so wisely advises.

And so D.R. stood up, held out his hand to the Lone Outdoorsman and announced that he and Estelle were leaving.

The Lone Outdoorsman took D.R.'s hand. Then, realizing what D.R. had actually said, let it go again and began pleading with them to stay for dessert and the rest of Westward, Westward.

No, said D.R. We must continue our journey to the east. We have to be in St. Louis by Tuesday in order to meet Eddie. We have a long, hard trip ahead. But we sure thank you for the food and the hospitality.

Estelle told the Outdoorsman thanks, and goodbye, and stepped out the door, with D.R. close behind.

From the ground D.R. turned to shake hands with the Outdoorsman again, and again to tell him thanks for the food and the very pleasant evening.

The Outdoorsman said that they certainly were welcome, and urged them again to stay on for dessert and the rest of Westward, Westward.

But D.R. said, no, they had to be on their way, that it was going to be hard to make St. Louis by Tuesday as it was.

The Outdoorsman said he understood, and walked with them to their bus.

As D.R. and Estelle drove away the Lone Outdoorsman stood in the empty campsite waving, until Urge's red taillights were swallowed by the night.

Then he went back to his camper and wrote this letter to his wife, while drinking a beer:

Dear Lucille,

How are you? Fine I hope. I'm having a good time in the big woods. Ha. There are not as many people at Eagle Rock this year as last year but at Pine Point there were more people this year than last year. Rig doing fine. Tall Charley he was wrong in all his predictions of mechanical failure and he owes me five bucks. Ha. Food good the not like you can cook it. Ha. Met a young traveling couple here at Eagle Rock, nice kids. Lucille you take care of yourself call Wendys any time necessary, you are sure to call him if you have to. I'll be home a week from Monday.

Sincerely yours,

William F. Dixon



## Nasco Farm and Ranch Catalog

part of the trouble with going back to the farm, just like going into a new job or hobby, is that the technology of gadgets must be looked into, so the new farmer will be able to tell whether he really needs a master artificial vagina, liquid semen refrigerator, and trans-rector electronic ejaculator, or whether he is going to believe in a little more organic process.

The nasco catalog sits smack in the middle of farmy equipment consciousness, and carries all of the above mentioned goodies. But, nasco also carries the more staple farm tools, like crank forges, seed sowers, cat hooks, load binders, pulaskis, lopping shears, and post hole diggers.

if you are a windowshopping farmer, or farmy windowshopper, write for the catalog. prices look reasonable.

## Nasco Catalog

### Free

from:  
Nasco,  
Fort Atkinson, Wisconsin 53538

or

Nasco-West  
Box 3837  
Modesto, California 95352



### GOLDIE HALTER

A most beautiful halter... one that really sets the pace and rhythmically belongs on the Champion.  
Brilliant white polypropylene with gold threads woven into it and all gold hardware. Wool nose band. Nothing else like it on the market, and you'll want to be the first to have it.

Like all other Johnson halters, top quality and design have gone into this outstanding and unusual horse halter. Sh. wt. 19 lb.  
C2443N-21-12 For 1100 lb. to 1500 lb. horse ..... \$5.95  
C2444N-22-12 For 800 lb. to 1100 lb. horse ..... \$5.95

### FARM POND HARVEST

This unique publication is exactly what pond owners and farmers interested in a pond have been looking for... a magazine dedicated to farm pond planning and construction - pond management - fishing and harvesting. Here are some typical articles from past issues: Build a Better Fish Pond; Stocking Private Ponds; Is Your Pond Clear or Muddy? Trout in Farm and Ranch Ponds; How to Control Weeds in Your Fish Pond; The Mud Suck and Your Pond; The Raising of Channel Catfish in Cages.

Each and every pond requires management, and to be managed properly, the owner must be aware of the principles involved. Farm Pond Harvest will help you to achieve a well managed and productive body of water... and keep you up to date on all of the latest news pertaining to farm ponds. If you own a farm pond, plan to build one in the future, or contemplate entering the fish-farming market, you won't want to be without Farm Pond Harvest.

Z497N 1 year subscription (8 issues) ..... \$3.00  
Z497N 2 year subscription (8 issues) ..... \$5.00



### STAINLESS STEEL UTILITY OR DAIRY PAILS

Tapered design for easier pouring. Made of extra heavy, high polished, stainless steel with thick, flat sanitary rim. Smooth and seamless... no crevices to catch dirt. Handy lifting handle. Extra thick bottom.

16 QT. CAPACITY. 12 1/4" top dia., 7 1/4" base dia., 12 1/4" deep. Sh. wt. 5 1/2 lb.  
B-21N-501 ..... \$17.85



### PORTABLE WATER COOLERS - With Recessed Spigot

Now deluxe Arctic Boy portable water coolers feature two exclusive!

Hot-dipped Inset is galvanized after forming to eliminate chips and cracks in zinc coating. Galvanizing after forming fills joint completely, eliminates possible leaks. Corrosion points and dirt catchers! Smooth, gleaming interior can be cleaned in seconds! No rough edges. An exposed metal, bottom rounded for free cleaning access!

Impregiate 90 - plastic on steel interior. Permanent sanitary bond. No odor - no taste.

They're made of quality materials throughout to make rugged abuse in the field... everywhere men work. Ideal for hunters and fishermen, too.

M1013N 2 gal. size. Sh. wt. 8 1/2 lbs. ..... \$10.70

M1014N 5 gal. size. Sh. wt. 14 lbs. 5 oz. .... 13.20

### EARTH ANCHORS

Constructed of high strength steel. Plate is arc welded to rod. Formed loop is welded shut. Screw in to install. Lengths effective temporary or permanent anchors for many applications.

ANCHOR WITH 3" DIAMETER PLATE. Length 30", will hold 1,000 lbs. Sh. wt. 19 lbs.  
E233N-330 Each ..... \$1.68; 12 or more, each ..... \$1.54

ANCHOR WITH 4" DIAMETER PLATE. Length 48", will hold 1,500 lbs. Sh. wt. 4 lbs.  
E233N-448 Each ..... \$2.84; 12 or more, each ..... \$2.54

### TUNED IN HARMONY - SWISS SHEEP AND COW BELLS

2. Fewer Swiss bell metal. The kind of pleasure they give is what makes farm life really worthwhile. You can afford their small luxury. Set of three cow bells size 4", 5" and 6 1/2". Sheep bells are 2 1/2", 3" and 3 1/2". Complete with handsome leather straps. Sh. wt. 8 lbs. and 4 lbs.

C132N-A Cow Bells. Set of 3 ..... \$44.00

C132N-D Sheep Bells. Set of 3 ..... 16.50

## Agricultural Extension Services

Each of the 50 states provides agricultural advice and services through county or area offices of their Agricultural Extension Service. These services are twofold:

1. Farm Advisors, extension agents, or county agents—depending on which state you live in, staff personnel under one of the above names are available for consultation or house calls in any area of agriculture or related fields such as turf care, home gardening, livestock, pest or rodent control and soil & water conservation to name a few. Most states usually also have a home economist.

2. Publications—a wide range of publications are also available through the AES or the U.S. Dept. of Agriculture. Some are for sale, but most are free. They are non-scientific & are written for the lay person. These publications cover a wide range of subjects of interest in commercial agriculture, home gardening or homemaking. Most states will have a catalog of their publications, such as the two from the University of California. You may either order publications by mail or pick them up directly at the county office. If you have specific questions, it is often best to pick up brochures at the county office so that you may consult the farm adviser at the same time. Agricultural Extension Offices are normally listed in the phone book under the county listings.

[Reviewed by Ed Johnson]

## Agricultural Publications

### Free

from:  
local county office

## Agricultural Publications

Free information on farming, livestock, forestry, soil science, etc. On general requests not more than one copy each of 10 publications is sent. Justification is required if you want more.

## Soil Conservation Service—USDA

Most rural areas of the US are incorporated into Agricultural Conservation Districts. This situation offers two services you should be aware of.

1. Soil conservationist & engineers—The services of these people are available to you through your local district office. If you need a livestock pond or watering sites for wild game, they'll do the engineering for you. They can also help out if your basement floods, your soil is blowing away or the creek is eating away the bank under your pad.

2. Agricultural Credit & Production—ACP, as this program is referred to, is a cost sharing program for land owners or users sponsored by the US Dept. of Agriculture. If you are located within a conservation district, you may be eligible for government money to help you develop streams, seed pasture, build fences or stabilize stream banks.

[Reviewed by Ed Johnson]



For information, write:  
In California:  
California ACP State Office  
2020 Olive Street  
Berkeley, CA 94704

Other states:  
look in phone book under U. S. Govt. ... Agriculture, Dept. of Soil Conservation District.

## List of Available Publications

\$4.00

from:  
U. S. Department of Agriculture  
Washington, D. C. 20250

## The Farmer and Wildlife

Durward L. Allen

1949, 1969, 63 pp.

Free

from:  
Wildlife Management Institute  
Wire Bldg.  
Washington, D. C. 20005

The small owls are almost universally beneficial. The farmer will do well to protect them.

A grazed woodland is neither a good woodland nor a good pasture. The farmer will profit by making it one or the other.

Formerly it was assumed that brushy fence lines might harbor crop pests. More recently we have learned that they are much more likely to serve as cover for birds, predatory and parasitic insects, and insect-eating small mammals. An Ohio biologist whose work was mentioned before showed that there were 32 times as many songbirds in brushy fence lines as in open crops. Such field borders also contained 60 times as many aphid-destroying lady beetles as sodded fence lines.

In addition to songbirds, a strip of brush between fields is attractive to skunks, weasels, and birds of prey which feed upon the mice in hay end grain fields. The small animals that live in shrubby fence rows are for the most part either beneficial, like the shrews, or of kinds like the woodmouse which do not commonly destroy crops. Sodded field borders are likely to harbor heavy populations of destructive meadow mice, which spread into croplands. These animals do not live in thick brush.

## The Negev

If you're into *really* dry farming, you can talk to Hopis or to Israelis. The Hopis haven't done a book yet. These Israelis have, and it's a fascinating business, involving detailed desert study, reconstruction of ancient agricultural techniques—terraces, cisterns, measuring weirs, plant adaptation—the careful life with minimum water.

—S8

### The Negev—The Challenge of a Desert

Michael Evenari, Leslie Shanan, Naphtali Tadmor  
1971; 345 pp.

\$15.00 postpaid

from:  
Harvard University Press  
70 Garden St.  
Cambridge, Mass. 02138

or WHOLE EARTH CATALOG

The native wild oaks (*Quercus agrifolia*), once established, was shown to have extremely high yields under water spreading in fertilized seed beds—yields equaling those of seeded hay crops in a humid region. After satisfactory inoculation by symbiotic bacteria in a humid region reached, several midland and vetch species developed and yielded well under conditions of runoff agriculture; their yields approached or surpassed that of the control oaks and thus were as high as or higher than those of commonly used unirrigated forage crops in more humid areas.

It often happens that not the whole plant but only some of its branches die. Other branches remain just as much green photosynthesizing matter as can be supplied with the available water and dry localities in years of great drought only a single branch out of many survives in this way. During the following years the plants may slowly recover from the drought and renew buds. This is a fascinating phenomenon which shows that, paradoxically, when death is partial it becomes a means of survival.

## A New Technology for Dry Land Farming

India's efforts against recurrent famine have led them into sophisticated new farming techniques for marginal land. They're the only farmers I've ever heard talk about synergy.

—S8

### A New Technology for Dry Land Farming

1979; 189 pp.

\$1 plus shipping (about 1 lb)

from:  
Ak Sherna  
Indian Agricultural Research Institute  
New Delhi 12  
India

To cite two examples, deep ploughing has been recommended for dry areas. This practice, however, is important only in areas where the subsoil has a highly compacted zone, thereby preventing the infiltration and movement of water and penetration of roots. Hence, before a particular tillage practice is advocated, a detailed study of soil structure would be essential. Also, it is obvious that if deep ploughing using suitable iron ploughs is to be adopted, the bullocks in that area must be bettered and made to gain the needed strength. Thus, if in 1971 it is proposed to introduce the practice of deep ploughing in a village, high-protein banya fodder and other high-quality fodder crops should be introduced in 1970. Ignoring such interactions has often been in the past the cause of condemning some of the implements designed by our agricultural engineers.

## Pruning Handbook

This booklet starts with a basic description of the way plants grow, lists pruning tools and their uses, and describes pruning systems for ornamental and fruit trees, berries and grapes, roses and vines.

(Suggested by Fred Richardson)

Sunrise

Pruning Handbook

Roy L. Hudson

1969; 80 pp.

\$1.95 postpaid

from:

Life Magazine & Book Company

Melro Park, CA 94025

or WHOLE EARTH CATALOG

Heavy pruning of the apricot is essential to insure regular fruit production. One year old shoots produce a portion of the crop, but after several years carry the major portion. As these spurs are usually good for only three years, they must constantly be renewed. The tree, in suitable areas, is a very lush grower and a heavy pruner. Unless kept in severe check, it will become too large and will bear its fruit high in the tree where it cannot be thinned or picked easily. The lower spurs will be shaded out by the lush foliage and new ones will not form. In short, you would have a fine shade tree but a very unsatisfactory fruit tree. The necessary pruning for good fruit production does not always develop a graceful garden tree.

One way to learn the fundamentals of pruning is to study the mistakes that other gardeners make.

General objectives of pruning have to do with modifying the growth of the plants to adjust it to the conditions of the garden.

Pruning Handbook  
Roy L. Hudson  
1969; 80 pp.

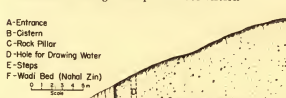
\$1.95 postpaid

from:  
Life Magazine & Book Company  
Melro Park, CA 94025

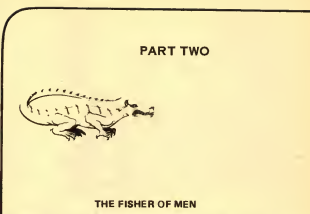
or WHOLE EARTH CATALOG

A-Entrance  
B-Cistern  
C-Rock Pillar  
D-Hole for Drowning Water  
E-Steps  
F-Wall Bed (Nephelium Zin)

Cross section and ground plan of the cistern



Retention of rainfall as soil moisture mainly depends on the infiltration characteristics of the soil, time available to the surface water to infiltrate, and the moisture storage capacity of the soil. Studies at the I.A.R.I. have shown that infiltration rates could be significantly increased by improving the structure of the surface soil and by adopting suitable cultural practices. Cultural practices such as wheat-maize or wheat-Sorghum rotations, deep ploughing and incorporation of roots, stubbles and green stalks of cereal crops into the soil were found to be most beneficial in improving the structure of the top soil. Inclusion of a legume crop in the rotation would also considerably improve the structure of the surface layers.



## PART TWO

### THE FISHER OF MEN

About two o'clock in the morning Dave Right and Estelle passed through a little town that was absolutely silent except for a light shining on the front of a funeral home, and a neon sign in front of a church across the street that said, "Dope is the Only Answer. Surrender Now." Actually the sign said that Christ was the only answer, but somebody had crossed out "Christ" and with a crayon written the word "Dope" just above it. It was crude lettering but the message was clear enough for D.R. to dig it, and he took three hundred micrograms of acid on the spot.

Half an hour later, the first messages from God began to float up through his soul. Feel good, God said. Feel what your eyes can see as smooth and soft and rounded. Let all the world around you, let go and start to breathe. Let the steering wheel melt to bread dough and bake a donut in your hands. Guide Urge around the curves by leaning with your body, so with Urge as a guiding sleigh, riding high and far away, beyond the desert, behind the moon, you won't be coming back anytime soon.

An image of his grandfather chopping kindling flashed on the movie screen of his mind as Urge's headlights caught the gleam of animal eyes on the road ahead. D.R. blew the horn so hard and long it turned into a roar, then whooshed on out of hearing like a jet plane passing by. The plane became a bug that flew into his ear, but when he probed his finger punched on through and scratched his brain instead, causing sparks to fly out of his eyes and turn to dragonflies. The flies swarmed, flew apart all over the inside of the bus, then came together in a cloud of smoke above a burning wheel in front of D.R.'s eyes. Fire was everywhere. Urge's headlights were sheets of flame, the water on the highway was a stream of molten red. In every grate in every room of some old house he'd fire in hissed and licked and brooded like inflamed sad eyes of some old ancient man. Water, D.R. yelled, someone bring some water! He leaned and guided Urge from room to crowded room, sweating with his body steering Urge past people singing hymns on Sunday mornings as they warmed before the fire in grates in all the separate rooms. He found a kitchen where someone was making donuts in a coal stove. He wanted one, and took it, but his mother jerked it from him saying, "Honey, no, come on now, you'll have to let me drive."

D.R. tried to say no, but his tongue ignored his mind and babbled stupidly on its own like a baby's. He was crying like a baby now. Crying was the only words he had and D.R. had oh so much to say. He wanted to say the kitchen, and his grandfather building fires. He wanted to say the river he had been baptized in, and swimming in that river with other people who had not lived. He was so sure he was a man, a man who was a man. The sun was shining on him, he was naked in it, but a shadow lay upon the water from a bank of tall acycanons on the other side. D.R. reeled in and stuck another dragonfly on his hook, and cast his net, upstream this time near an old snag of a tree where the water seemed to stop a little at the flow. The hook sailed through the sunlight and plopped into the water a few feet from the snag. Instantly a giant catfish took hold and pulled so hard D.R. fell on the muddy riverbank and slid into the river, where an unseen current sucked him far into the river and dragged him down below. Airl he tried to call. Breathe, give me breath! But the sun was full of water now and he could make no sound. Deeper and deeper he sank in the dark and murky river. Nothing he could do would help him rise again. Nothing he could think would give him air. The chill of death entered his fingertips and toes and down he flowed up through his body to his throat to gather in a pool. D.R. was drowning in the pool that filled his throat and choked him. He felt his life go on, and then he felt a fish with scales and fins, and tail, tempted by a powerful light that dangled from his brain. The light scared him but he needed around it, lured and terrified. Against his will he nibbled at its end. As soon as his lips touched the light a three-pronged hook snatched his throat and yanked him up. Blood filled his throat and ran out of his gills and eyes and esophagi and spilled upon the sand. He struggled to ease the pressure of the hook against his flesh, but the fisherman only laughed and dangled him up and down. At last when he could stand no more the fisherman gave the line a jerk and ripped D.R.'s tongue out by the root, and dropped him bleeding to the sand. Words rose up inside him to protest but they could get no farther than his throat. Words that started deep inside him lifted through his system to collide and fall apart in heaps of jumbled a's c's. Words he'd said in childhood sand, charging into words he'd heard old preachers say in sermons long ago, words of preachers, words of teachers, words mysterious kin folks uttered over Sunday chicken dinners into words he'd muttered to himself in saying who he was and might become all crushed against the roadblock and piled up in a grave of words as dry and hard as bone. D.R. picked up a bone shaped like the letter W. He smelled it, licked his tongue across it, and held it to his ear. He tried an O, and R, and a broken D, but they were all the same. Dead. Dead. All the words were dead, not one had lived to tell what happened, none had ever known what he'd felt. He told the fisherman, but all he could do was cry. Tell it, said the fisherman, but all he could do was cry. The fisherman cursed and roughly kicked D.R. back into the river. The water scalded his wound as it mixed with blood and made a soup for bones of broken letters D.R. clutched at for support to keep from drowning.



## The Cultivator's Handbook of Marijuana

How to grow good pot. The best book on the subject.  
—SB

### The Cultivator's Handbook of Marijuana

Bill Drake  
1970; 88 pp.  
\$2.50 postpaid  
from:  
New Moon Imports  
818 Wilmette  
Eugene, Oregon 97401

or WHOLE EARTH CATALOG



### The Maple Sugar Book

My family had a sugar bush in Michigan, so we always had a cellar-room full of gallon cans of pure maple syrup, which solved our Christmas-giving problems and saddled me with an early addiction.

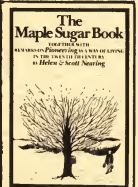
This book by the Nearings (of Living the Good Life) continues their fine philosophical rap and lays out the definitive information on maple-sugaring. You don't have to have maple trees to enjoy it, but if you do...

—SB

### The Maple Sugar Book

Helen & Scott Nearing  
1950, 1970; 273 pp.  
\$2.75 postpaid  
from:  
Schocken Books, Inc.  
67 Park Ave.  
New York, N.Y. 10016

or WHOLE EARTH CATALOG



Softwood in the sugar brush cuts off sunlight. Sunlight is vitally essential to sap flow, especially in the early days of a sap season. First-class sap runs, early in the season, often occur entirely on the south side of the trees.

If syrup is of proper consistency it will keep from one season to another without deterioration, except that fresh-made syrup possesses a delicate tan and bouquet that old syrup invariably lacks.

Here is a typical case in our neighborhood. The household is made up of a man, his wife, and five children, the oldest a boy of fifteen. Sugar-time comes in late February or early March. The snow is so deep to the woods that logging and wood cutting (the sugar winter occupations) are difficult or impossible. In the homestead there is little to do beside the regular chores. The family has a usual barn, a sugarhouse, 1,500 buckets, covers, and spouts, an evaporator, a gathering tank, a team of horses standing idle in the barn, a supply of sugar wood. Not a single cash outlay is involved in the entire sugar operation. School allows the children a three-week "sugaring vacation." The man and his family tap out. All gather. He boils and she puts up the syrup. In the course of five or six weeks, if weather is favorable, the household can produce 350 to 400 gallons of maple syrup. If the syrup is put into steel drums, provided by one of the companies that buy syrup, there is not a nickel of necessary cash outlay, unless there are replacement parts for worn-out equipment.

Many writers have picked up on a piece of misinformation which holds male plants to be useless for drug purposes. It is substantially true that males have a much lower potency than females, but that is not the reason that they are pulled up and destroyed by professional growers. They are pulled primarily because if the male is allowed to go to maturity and pollinate the female, she will lose considerable potency because much of her energy will be turned to nourishing the fertilized seed. What might be gained, then, in terms of overall bulk at harvest time by keeping the male plants will be lost in per-unit potency of female plants. So it becomes a trade-off situation where you have the option of lots of leaves (both male and female plants harvested with lowered potency per unit of yield, or less yield) (destroy the males and keep only females) with a higher per-unit potency. It is up to the individual cultivator to make the decision.

Another common source of death and destruction among indoor Cannabis plants is tobacco smoke. It is with a heavy heart, my fellow Americans, that I announce tonight that the smoking lamp is not lighted during grass cultivation. If smokers are using the same air supply which the plants must breathe, you must try to filter the air somehow or take great risks with the plants' survival up until the third week, and with their health beyond that.

### General Viticulture

This book includes everything needed to know by anyone really interested in grapes. It is mainly concerned with vineyard production but it contains valuable information for small arbor and home gardening as well. Winkler deals with soils, propagation, pruning, irrigation, diseases, pests, raisins, wine grapes, table grapes and even includes a detailed appendix of costs involved. This book is the only complete work on grape production, it is a U.C. text, make your own raisins.

[Suggested by Ron Pietrowski]

### General Viticulture

A. J. Winkler  
1962; 633 pp.  
\$11.50 postpaid  
from:  
University of California Press  
2223 Fulton St.  
Berkeley, Calif. 94720

25 West 45th St.  
New York, N.Y. 10036

or WHOLE EARTH CATALOG

For best development the vinifera grape requires long, warm-to-hot, dry summers and cool winters. It is not suited to humid summers, owing to its susceptibility to certain fungus diseases and insect pests that flourish under humid conditions. Neither will it withstand intense winter cold. A long growing season is required to mature the fruit, and, since the green parts of growing vines are likely to be frozen at temperatures below 30°F., areas subject to late spring and early fall frosts must be avoided. Rain is desirable during the winter, but deficiencies in rainfall can be made up by irrigation. Rains early in the growing season make disease and pest control difficult, but are otherwise not detrimental to the growth of the vine. Rains or cloudy weather during the blooming period may result in a poor set of the berries, especially in some varieties, and rains during ripening and harvest permit much damage through fruit rot. Where rains are to be produced by sun-drying between the vine-rows, as in California, a month of clear, warm, rainless weather is essential after the grapes are mature. Higher humidity can be tolerated in cool regions than in warm regions.

Acapulco Gold, Panama Red and other strains of grass are reputed to be particularly potent because of a fortuitous combination of climate and soils. Actually, soil has nothing to do with potency, except that it contributes to the plant's health, and certain mineral deficiencies do cut down on resin potency (see page 31). Climate has a similar relationship with potency. It is the genetic properties of grass which determine potency, and these genetic properties vary from strain to strain, but can be easily manipulated by cultivators.

Left: Female flowers  
Below: Male flowers



If the seedlings are to be transplanted at any point, it will be helpful to germinate them in containers making transfer to the planting soil easy and non-traumatic. Germinating the seeds in icecube trays or similar device allows easy transfer of the seedlings in their original soil. The ball of soil can either be popped out at transplant time; or each depression in the tray can be lined with foil or plastic before the germinating soil is added, making transplantation a matter of lifting out the ball of soil intact and placing it in the receiving soil equally undisturbed. The foil or plastic film can be removed easily prior to placing the seedling in its new home.

### Wild Rice

Lord god, imagine having enough wild rice.

I always thought that Indians had some kind of legal monopoly on this expensive staple-delicacy. Maybe not. Maybe you can grow the expensive staple-delicacy in your own fresh-water swamps.

—SB

[Suggested by Ron O'dor]

### Wild Rice

William G. Dore  
1969; 84 pp.

\$2.00 postpaid

from:  
Queen's Printer  
Daly Bldg.  
MacKenzie & Rideau  
Ottawa, Ontario  
Canada

or WHOLE EARTH CATALOG

All the wild-rice sold today comes from untended stands that grow in streams and other waterways. There have been attempts to control the supply and level of the water, or to create new impoundments in locations where this is possible, but cultivation in a paddy has been done only on an experimental scale. Most of the grain is still harvested by hand from canoes. The operation of harvesting, however, is conducted on a much larger scale than formerly, and, in some regions, it follows a well-organized plan.

Wild-rice forms thick productive beds in some small rivers in southern Ontario. In these rivers have rushing floodwaters in the spring. In midsummer, standing water occurs all the shallow water, leaving only a narrow mid-water channel. A patch of perennial plants, including cattails and pickerweeds, is at the right of this picture, taken near Dalrymple, Victoria County, Ont. (Photo by W. L. Cody)



## ABC and XYZ of Bee Culture

The first edition of this authoritative book was written in 1877 by Mr. A. I. Root. The current edition, the 33rd, is edited by Mr. E. R. Root, with the help of H. H. Root and J. A. Root. You get the picture.

We've been told by several people that beekeeping is one of the easiest ways to make extra money with little effort and a certain amount of down-home adventure. If you are we're you eat, food from flowers is hard to beat.

From whatever standpoint—commercial, nostalgic, or amateur scientific—this is a fascinating and useful book. The Roots also have a catalog of bee supplies, a beginner's book (Starting Right With Bees), and a magazine (Cleanings in Bee Culture)—monthly, \$3.00 per year.

—SB

[Suggested by Tassajara Zen Center]

## ABC & XYZ OF BEE CULTURE



## Wildlife Nurseries

If you get open water, you can plant various goodies that will attract ducks, as well as muskrats and fish. This is a catalog of the goodies, as well as some items for upland game birds and deer.

## Wildlife Nurseries Catalog

\$0.50 postpaid

from:  
Wildlife Nurseries  
P.O. Box 399  
Oaksho, Wisconsin 54901

Giant Wild Rice is easy to grow when fully-ripe, sun-growing seed is used. Many areas throughout the U.S. and Canada where Wild Rice does not grow, provide conditions suitable for it, and seeds could and should be planted with Giant Wild Rice. Briefly stated the conditions required for its successful growth are fresh water streams, ponds or sloughs having a change of water (such as an inlet or outlet), soft mud bottom being best, but will thrive on sand, and in water from 6 inches to 3 feet deep. Sunny sheltered bays or coves where planting will not get the full current or direct waves are ideal for it.

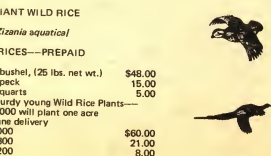
Near the second it will grow along the streams 25 to 50 miles above where they enter the sea, where the water is not salty to taste and the tide not over four feet. Spots where fresh water brooks or springs enter the stream are more fresh and better suited for it. Savannah; however under ideal conditions we have grown seed in the "Deep South."

## GIANT WILD RICE

(Zizania sp.)

PRICES—PREPAID

1 bushel, (25 lbs. net wt.)	\$48.00
1 peck	15.00
2 quarts	6.00
Sturdy young Wild Rice Plants—	
1,000 will plant one acre	
June delivery	\$60.00
100	10.00
200	8.00



ABC and XYZ of Bee Culture  
1877 — 1966; 712 pp.

\$5.75 postpaid from A. I. Root

or WHOLE EARTH CATALOG

Starting Right With Bees  
100 pp.

\$1.00 postpaid from A. I. Root

or WHOLE EARTH CATALOG

Catalog

free

from:  
A. I. Root Company  
Medina, Ohio 44226

**MARKETING HONEY**—The beekeeper with four or five colonies of bees will have no difficulty in selling honey to his neighbors. It soon becomes known that he has a few hives of bees and the people in the vicinity, feeling that they can buy "real honey" will go to the neighbor and pay good prices furnishing their own utensils. If the honey is of first quality there is no trouble about selling the entire crop from the door way.

## How to Adopt a Colony of Bees

This magical method may be used for removing bees and their honey from an attic without the use of pesticides or other violence, or for adopting a colony from a bee-tree. All the entrances, into the colony must be carefully stopped up with plaster, caulk compound or other poop. A six inch 3/4" diameter hole is left, over which a bee escape (one-way exit) is placed. Following this, a box hive is strategically located with its entrance as close as possible, preferably within a few inches, of the bee escape. The hive may then be enticingly smeared with honey or sugar syrup on its landing strip, in her cage, with courtiers, is suspended within the new hive. When the other bees learn of her presence, they will all go into the new hive, eat out the plug of sugar which seals the entrance to her royal residence, and liberate her. One then has a going colony of bees in the new hive. After a few weeks, the original colony will be quite depleted or almost entirely absent. At this point, the entrances to the attic or tree may be completely opened and the bees from the new hive will then go back, take all the honey out, and bring it into the new hive, which may then be moved to any convenient location.

I tried this method on a colony of bees in my attic with partial success. Unfortunately the bees found a new way to get back into the attic under the shingles which I had not adequately blocked, and I was left with two competing colonies. However, I think the colony in my attic is now getting stronger, and I will eventually have all the bees in it. It would seem desirable to do this in the spring when flowers are blooming, since in the autumn I have found the bees are less energetic and have to be fed with sugar syrup. A reliable source of bee supplies is the Sears Roebuck, Suburban and Farm Catalog. In order to get a catalog, one must first place an order at a Sears Catalog Order Desk, and if they think you look like a good potential customer, they will give you a free catalog to take home. Supplies arrive by mail or parcel post in less than a week, but queen bees are sent only from April 15 to Oct. 1, and take about a week and one-half to two weeks to arrive.

P.S. If it is necessary to move the beehive less than two miles, it must be done in two steps: First the hive is moved more than two miles away and the bees are allowed to get settled in that location, and then it is moved back to where you really wanted it in the first place, which can be closer than the original location as long as it is more than two miles from the intermediate place.

David Collins, M.D.  
San Diego, California

## WAMPEE — DUCK CORN

(Peltandra virginica)



Excellent Duck food — especially attractive to Wood Ducks and other Marsh Ducks. Produces an abundance of large rather fleshy seeds (berries), as large as kernels of corn, making food late into the season.

PRICES — PREPAID

"WILD LIFE" Nature-ripened pure seed  
10 lbs., \$15.00 - 5 lbs., \$8.00 or \$1.75 per lb.

## Walter T. Kelly Bee Supply Super Market

mail order bee supplies

Catalog

Free

from:  
Walter T. Kelly Company  
Clarkson, Kentucky 52726

We have assembled here the necessary items that we need in starting with one hive of bees, including the necessary tools and a book of instructions. After the beginner has worked with bees for a short time he will be able to order intelligently his future requirements.

Cat. No. 367. KELLEY'S COMPLETE BEGINNER'S OUTFIT as above  
Wt. 38 lbs. F. O. B. Clarkson (Bees prepaid). Each **\$31.50**

GUARANTEED SAFE  
HONEY

Nylon Mesh Ventilator



Our gloves are of supreme quality. The cowhide is extremely soft and pliable so that you can handle the frames rapidly. The top gauntlet is treated duck that will outwear the gloves. We are including stuff nylon mesh now in place of the screen wire and with the edges folded over the top gauntlet will not pull out. An elastic at the top makes them bee tight. We can furnish these without the mesh ventilator at the same price.

Per Pair **\$3.50**

## Animal Traps

If you're getting rid of a pest without being too mean about it, or if you're after a wild pet, these traps will catch sundry small animals alive. Raccoons, possums, mice, turtles, sparrows, quail, fish, rabbits, cats, rats, pigeons. Hawahart is the best known. Catalogs free.

—SB

Havahart  
120 W. Water St.  
Oskosh, N.Y. 10662

Johnson's  
Mowery 17, Kentucky 42462

Mustang Mfg. Co.  
Box 10380  
Houston, Texas 77018

Tomahawk Live Traps  
Box 323  
Tomahawk, Wisconsin 54487



## WHEN MORNING GUILDS THE SKIES

When morning guilds the skies my heart awakes cries out the night sky light blossoms yonder where the roll is called out to a weazy traveler looking for his home among the desert sand dunes. Stained glass pictures of holy desert ground pale caucuses set against an earth of weaving blonde up toward the sun about to rise behind Mount Sinai so vast and barren yet something lush about it something cool promises to satisfy whatever thirst it causes weary travelers looking for a home among the desert sand dunes rolling up as wings and fly away. What building is this window in Would it hurt if I would touch it Would it shatter into pieces Would the spirit ever know end if so would he mind How heavy rolls on two ground how far burlap by the face a burlap bag of knitting stuff to carry Estelle's in burlap weaves of pieces full of burlap holes around the seams of burlap weaves together for a bag of knitting stuff to knit together into things that keep you warm and dry and hold together parts of wholes a million tiny holes to small small leather harness over mule sweat small sweat and miner's small leather fleshing on your ass small gloves in my nose of leather rolls of leather doekin smell and feel the leather strap get tighter and myhead.

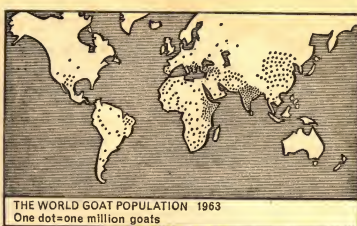




Goat Husbandry  
David Mackenzie  
1967; 368 pp.

\$16.75 postpaid

from:  
Transatlantic Arts  
Trade Dept.  
North Village Green  
Levittown, L. I., N. Y. 11756  
or WHOLE EARTH CATALOG



THE WORLD GOAT POPULATION 1983  
One dot=one million goats

Because goats are animals, they must have dairy characteristics. Check to see that the doe has a firm spine, thin neck, sharp withers, well-defined spine or backbone and hips, thin thighs, and rather fine bones. The skin should be thin and firm over the ribs. Look for a wide opening of ribs and roomy barrel. This will help you to know how much feed she can eat. The constitution, or physical nature, is an important factor by the depth and width of the chest. It's important to look at the udder, too. It should be large when full of milk and very much smaller when empty. A large udder does not always mean a high milk yield.

The goatherd who knows his flock and range can lead on the first stage or two of their wanderings and as soon as they are all busy at a popular stop he can quietly slip away. The flock queen will call him when she is ready to move on, but if he has disappeared she will take the lead herself. This tactic works well in broken wooded country; but in open country the delinquent leader is caught in the act of escape and the whole flock comes scampering after him.

Under such conditions the goatherd must use plain language to tell his flock when he has ceased to be their king billy. Mere

rudeness won't suffice; king billy's manners are not of the best; a push and a grunt and a show of displeasure convey his warning to the flock to obey and follow him more closely. But king billy doesn't throw sticks or stones; the performance of such an act is a special characteristic of man and monkey which is peculiarly repulsive to all other species. So long as it is carried out calmly and ceremonially, so as not to be mistaken for mere rudeness, the flock will turn their backs on the goatherd, will go their way and leave him to his. The popular use of effeminate males has produced flocks of half-witted goats which may be incapable of finding amongst themselves a flock queen of sufficient independence of character to accept even so broad a hint as the thrown stick. If such a flock refuses to be content without a king billy to lead them, the only cura is to give them a real one.

### Dairy Goat Journal

monthly goat gab, latest in goat gear, goats for sale, goat cheese recipes, goatkeepers' classifieds, get your goat.

-jd

### Dairy Goat Journal

Kent Leach, editor  
\$3.00 per year (monthly)

from:  
Dairy Goat Journal  
P.O. Box 836  
Columbia, Missouri 65201

### Dairy Goat Guide

A new goat magazine. More family, less technical, than the Journal.

-S8



Dairy Goat Guide

Jerome D. Belanger

\$3 (yr 10 a year)

from:  
Countrywide Publications  
318 Waterloo Rd  
Marshall, Wisconsin 53659

### Dairy Goats

This book bridges the gap between the 4-H pamphlet and the \$15 goat book. It covers everything you should know before and when you get into goats. You can skip the analysis/amplification (if you want) of how a goat's stomach works, the manufacture of proteins, etc. and just discover that one half pound of good dairy mix grain for each pound of milk produced is what you want.

Perhaps the person who already knows a bit about goats will find that the most interesting and valuable part of the book is the last two pages which lists breed clubs, goat journals, books, and other literature.

Addendum: My friend and fellow goat husbandman, Don Symanski tells me that the one he went to the book for wasn't there—a goat's normal temp. I'll tell you, it's 101 to 102 degrees F.

[Reviewed by Steve Katona,  
Suggested by Al Ames]

### Dairy Goats—Breeding/Feeding/Management

Byron E. Colby

77 pp.

\$1.00 postpaid

from:  
The American Dairy Goat Association  
P.O. Box 180  
Spindale, North Carolina 28160



## For Better Health DRINK GOAT MILK

### BULGARIAN YOGURT

CONVERT GOAT MILK INTO YOGURT for health and profit. THE CULTURIZER DOES IT ALL. Our Yogurt CULTURIZER lets you make Fast Old World Flavor. Facts FREE! Dolefresh Yogurt Co., Inc. 2707 GS, Santa Cruz, Calif. 95060.

### Handi Goat Pan for Feed or Water

One Place — No Spill, 6 x 11 x 11 Heavy, 600 x 11 inch. Wide so that it is hard to tip. No spill feed or water. Live Stock use, also can be used in the Home for Potatoes, Vegetables and Eggs. Pan Diameter: top 16 3/4 inches, bottom 15 inches. Weighs 3 lbs. — \$1.25 each Postpaid, lots of 6—\$3.00 each Postpaid.

### Handi Goat Feed or Water Trough

For Feed or Water, 12 gauge steel, 600 x 11 inch. C. W. Broder, welded to trough for strength, won't dent. 2 foot trough, 12 inches wide, trough inside 16 3/4 inches, 4 1/2 inches deep. 101A—Trough—Weight 11 lbs. \$8.95 Postpaid. Other equipment for other Livestock. State Requirements. Terms—Cash by Check, Money Order, Personal Checks allow for 10 days Clearance. C.O.D. Orders acceptable, but there is a service charge of \$1.00.

### John H. Thiele

P. O. BOX 42-G WARWICK, NEW YORK 10990

### Goat Buying

Goat owners are a lot like horse traders. Be careful. Seek out experienced advice. If possible, have someone whose opinion you trust along with you when buying a goat. If you are paying fifty dollars or more, as you sometimes necessary, for your goat, invest in a vet's inspection and opinion at all points possible. My preference is unquestionably Toggenburg. A three year old doe whose milking and kidding record is available is most desirable. Toggenburg goats cut the price in half by selecting bucks who can breed back to almost pure strain in a few years. (Toggenburg on the doe's side as that's who determines milk production.) A last word: if you are in the market for goats, it should be already like them. They are almost all beautiful animals. When I first got into goats I bought a nice three year old Alpine doe just dying up. She looked like an emerald. Beautiful. She did dry up shortly. I bred her, fed her for five months. She had trouble kidding and her milk production was poor. Nothing I could do in the way of feeding and milk schedules helped. She had a beautiful pet goat but awfully expensive. Somehow I like the good milkers more.

Steve Katona



Lesson one about dairy goats—don't expect them to "mow" your grass for you. Goats don't care much for grass.

But they are crazy about trees and bushes—especially fruit trees, shade trees, rosebushes, raspberry bushes, any other large woody plants you or your neighbors treasure.

A goat will strip a young fruit tree to a bare stub faster than you can run from house to orchard to stop her.

Several goats will chew enough bark off a good sized shade tree to kill it in a single season.

If trees hang over their pens, the goats will dance about on their hind legs and trim the leaves evenly 4 to 6 feet above the ground. Makes the place look like a park.

Even innocent-looking baby kids will strip the bottom branches of an ornamental evergreen—before they have really learned to eat hay!

Moral of this is—before you get goats, get some good goat fencing. Four foot high fences necessary. They will climb on the fence to reach trees on the other side, so make it sturdy. Take care with gate latches. Bored goats scratch their heads on things which stick out—like gate latches. They have a habit of opening gates. Then they head for the fruit trees.

A length of chain and a snap hook makes a nice auxiliary latch on your gates.

About that Grass—

Goat grass raises find it necessary to mow pastures and barn lots from time to time—to keep the grass short and neat-looking.

Goats can make good use of pastures—especially if you have planted legumes such as alfalfa and clover. Good farmers mow pastures just to keep the plants young and growing for more protein.

But goats are not by nature good grazers. If your interest in goats is a well-mowed lawn, we suggest sheep instead.

### Feeding the Kids

Giving kids a proper nutritional start without expensive goat milk is a good practice; particularly if you can sell the goat milk for a higher price than necessary to buy cow's milk for the kid. Goat's milk is ideal for growing out a kid, but you lose your income during this time. If you intend to rear the kid without mother's milk, never let him nurse. Milk the colostrum or first milk from the mother and feed it at body temperature to the kid from a nipple bottle. Continue this for three to four days. The colostrum is laxative, high in carotene, protein, and other nutrients, as well as antibodies which are so necessary to the newborn kid's digestive system and developing tissues. The nipple bottle is usually preferred over pan feeding of milk as it is more natural for the kid and less air is gulped which can cause digestive upsets.

The small fat globules and the soft curd of goat's milk contribute to its ease of digestibility. Some farmers who are allergic to cow's milk can consume goat's milk readily, due largely perhaps to its easier digestibility. In a great many cases goat's milk has proved especially valuable for infants and invalids.

## Livestock and Poultry Production

*if you were never in FFA or 4H, and if you think a polled hereford is a female cow standing on stilts so she can eat the leaves off trees, then you could probably stand to read this textbook, although aimed at the beginning animal husbandry major, so that there is a morbid interest in the industrial aspect of raising to slaughter, there's a lot of useful information here about cattle sheep hogs and poultry. look past the "agriculture makes our country strong" bullsh\*t, and don't be put off by the questions at the end of every chapter.*

should serve as an introduction to animal science.

-jd

LIVESTOCK & POULTRY PRODUCTION



**Livestock and Poultry Production**  
Bundy and Diggins  
1968, 723pp.

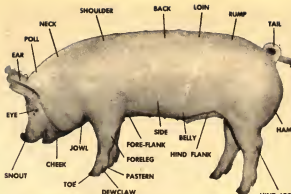
**\$10.95** postpaid

from:  
Prentice-Hall Inc.  
Englewood Cliffs, New Jersey 07632

or **WHOLE EARTH CATALOG**

A ton of raw garbage formerly produced 50 to 80 pounds of pork. With the changes that have come about in kitchen and restaurant management, a ton of garbage today may produce only from 20 to 30 pounds of pork. Unless considerable gains are fed with the garbage, a poor carcass will be produced.

Garbage-fed hogs were responsible for the rapid spread of vesicular exanthema during the past few years, and cases of trichinosis have been prevalent in some communities where raw garbage was fed to hogs. In feeding garbage, extreme care should be taken to maintain sanitary quarters. Concrete feeding floors are recommended, and the yards should be thoroughly cleaned and disinfected regularly. Thorough cooking of pork products is necessary to kill any disease organisms which may be prevalent in the meat.

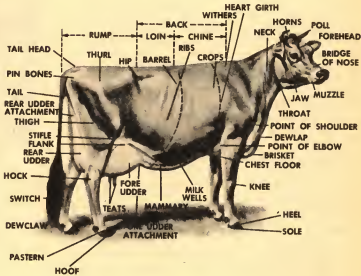


**POLLED HEREFORDS.** In 1900, Warren Gammon of Iowa wrote to nearly every breeder of Herefords in the United States asking if they had any cattle which did not develop horns. He succeeded in securing 13 head of purebred Herefords that were polled. From this small beginning the polled Hereford breed was established.

The breed has become very popular among breeders who desire the Hereford form but dislike the horns. Polled Herefords originating from registered Hereford stock may be registered in both breed associations.

In form and characteristics, the polled Herefords closely resemble their ancestors, the Herefords. The distinguishing difference is the absence of horns.

**PASTURES.** The natural feed for dairy cattle is pasture. The pasture season should be made as long as possible. Fall-seeded ryegrass provides early spring pasture, in areas where it is adapted, and may be followed by native grasses, or a legume and grass mixture. Sudan grass, or a Sudan grass and soybean combination, makes an excellent summer and early fall pasture. In general, a legume and grass combination provides more grazing per acre of highly nutritious forage than any other common pasture crop. Pastures recommended for beef cattle are suitable for dairy cattle.



## Veterinary Guide for Farmers

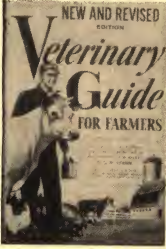
how to keep them healthy down on the farm.

-jd

**Veterinary Guide for Farmers**  
G.W. Starn  
1963, 59-384pp.

**\$6.95** postpaid

from:  
Harcourt Books, Inc.  
70 Fifth Avenue, New York, New York 10011  
or **WHOLE EARTH CATALOG**



## HERE'S THE WAY MANY SURGEONS TIE A KNOT

Left: This is a good way to tie a knot, especially when animal material is short or slippery. Instead of using forceps to draw the opposite end out to give a long loop, pull the knot.



Left: The knot is wound around the forceps, drawing it out to give a long loop.



Right: The end of the suture is pulled through the loop.



Left: After tightening the first part of the knot, make the second loop by pulling the suture material out to give a long loop. Then complete the knot by pulling the second loop into the first, as shown on page 100.

## FEVER AS A SYMPTOM

The temperature of an animal's body rises above normal when most heat is produced than is given off. This happens naturally under a number of conditions, such as during exercise, after eating, in very hot weather and among cows in the later stages of pregnancy.

When the temperature of an animal rises without apparent reason, it is generally caused by illness or injury. That is why the presence of fever is of great importance in the diagnosis of disease, especially those that affect the internal organs.

An increase in temperature is not the only symptom of fever. Sometimes when the temperature goes up slightly, chills may occur, and these in turn are accompanied by trembling muscles, cold skin, arch their coat and arched back.

A strange thing about fever is that the legs, ears, nose and base of the horns in cattle and sheep become alternately hot and cold even though the internal temperature of the animals remains uniform.

One ear may be hot while the other is cold. Later these conditions may be reversed, or both ears may be hot or both cold. The same thing holds true of legs and other extremities.

Other signs of fever are dry muzzles and snouts, loss of appetite, indigestion, constipation, increased thirst, decreased urination and mental depression.

Chills do not occur with all fevers but with disease where microbes or toxins are in the blood stream. Among them are anthrax, shipping fever and malaria accompanied by pus formation. Once the body becomes used to a higher temperature, chills cease. But they will come back if the animal is taken to a colder place.

## Veterinary Supplies

three companies selling serums, vaccines, instruments, and drugs, by mail.

-jd

Catalog

free

from:  
Kansas City Vaccine Co.  
Stock Yards  
Kansas City, Mo. 64102

Catalog

free

from:  
United Pharmaceutical Company  
8366 LaBrea Blvd.  
LaBrea, California 92041

Catalog

free

from:  
Eastern States Serum Co.  
1727 Harden Street  
Columbia, South Carolina 29204

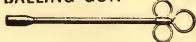
Rid lice in winter  
Flies in summer



the newest addition to our line. Wt., complete, 26 lbs. \$26.95

**ROPE CHAIN OILER**—This cattle oiler combines many of the finer features of other oilers. Wick is heavy hemp hawser, providing smooth, sure flow of insecticide-in-oil. Heavy chain is wrapped end-in-end, fitting between strands of hemp to give greater strength, longer life and coarser hide-cleaning action. Five-gallon reservoir is fitted with automatic valve actuated by rubbing action of cattle so that insecticide is given down only when cattle are working on it. Action thus is entirely automatic, requiring attention only in filling reservoir. This is our finest oiler and complete, 26 lbs. \$26.95

## BALLING GUN



Balling Gun. Takes 00 and 000 capsule. All brass construction—nickel plated. One piece head. Length 12 inches.

Wholesale \$1.60

## Pig Tooth Nipper



Chrome Plated  
Special forged steel with well sharpened blades. Spring Loaded 4 1/2" long.

(Wt. 7 oz.) \$2.60



SIGNS

Signs along the freeway, rolling selling telling messages from someone's head to mine. Someone wrote them, someone hoped and sent them to the billboards and stuck them to the walls of everybody's memories down old forgotten halls. Eat somewhere and sleep somewhere, we pleased for you to eat and sleep and buy our gas and oil. You love us and we'll love you, the town of Lone Oak up ahead invites you to its food and sleep and oil and gas and friendly hospitality from Mayor Andrew Hoss. Welcome said the C.A.'s, there's room in all our inns. Pioneer Hotel, Frontier Motel, Dizzy Burger French Fries Cole Slaw Blue Skies, Turnlewood and Dragonflies, we've got it all in Lone Oak, Welcome To Our Town.

## FLIPPING THE DIAL

Estelle turned the radio on and began to flip the dial MICHELLE MY BELLE IN THE FIRST GAME OF A WEEKEND DOUBLE-HEADER WITH THE VOLUME UP ONE MILLION NINE HUNDRED THOUSAND JOYS AWAITING ALL WHO SUFFER WITH CHRIST ON SALE NOW FOR ONLY NINETEEN NINETY FIVE SINGING BLUE MOON OF KENTUCKY SHALL BE DIFFUSED BY PRESIDENT NIXON AT A PRESS CONFERENCE WHO SAID THE MIDDLE LETTER IN THE WORD SIN IS "I" but she couldn't find anything she liked so she turned it off.

Livestock  
Land Use

65



## Rabbits

Here are some good books on rabbit raising. If you raise rabbits you can eat them and tan the hides for clothes to keep you warm.

[Suggested and Reviewed by Martin K. Rorapugh]

**The Purina Rabbit Book**, available from your feed store or probably from Ralston Purina Company, Checkerboard Square, St. Louis Mo. 63199. This one is free (they might appreciate postage if you send for it I don't know) and gives all the information you need if you just want to eat the rabbits. It gives cage dimensions, good breeding practices (for the rabbit), and feeding suggestions. The best part of this little book is that it gives a calendar system so that you can keep track of when to do what. It's a good easy thing to follow. The same people also offer pamphlets on rabbit diseases, and cage plans.

**Raising Rabbits** Farmers Bulletin No. 2131, U.S. Dept. of Agriculture. Available from Superintendent of Documents, U.S. Govt. Printing Office, Washington, D.C. 20402 cost 15 cents. Covers basics but doesn't cover diseases or tanning hides. Its cheap but not much better than the free one above.

**Commercial Rabbit Raising** Agricultural Handbook No. 309, U.S. Dept. of Agriculture. Available from Superintendent of Documents for 30 cents. This is a good cheap book. It covers all the basics like how to select a breed, feed and manage the herd etc. It also tells how to use the manure (as if you didn't know) and cure rabbit skins. This is a *goodie* for the price.

**Domestic Rabbit Production** by George S. Templeton (He's a real genuine expert. If you want the best and don't mind paying more this is it. It is complete. Covers everything the other ones cover plus rabbit diseases (thorough and easy to follow), tanning the hides, rabbit recipes, and get this, quantity recipes adjusted for 25, 50 or 100 souls. Its published by the Interstate Printers & Publishers, Inc., Danville, Illinois.

**Domestic Rabbit Production** George S. Templeton

**\$6.75** postpaid from Interstate Printers & Publishers, Inc. 19-27 North Jackson Street Danville, Illinois 61822

## More Rabbits

Rabbit raising: In addition to the books you have already listed previously here are some more:

**American Rabbit Breeders Assoc.** 4323 Murray Ave. Pittsburgh, Pa. 15217 25 ¢

**Boy Scout Merit Badge Series** No. 3376

**Albert Milling Co.** 800 West 47th St. Kansas City, Missouri 64112 **Raising Rabbits** (free, I think) **Commercial Rabbit Raising** 50 ¢

**Glick Manufacturing Co.** 1695 Almaden Road San Jose, Calif. 95126 **Catalog & Book** \$1.00

**Commercial Rabbit Growers Discount Club** P.O. Box 5693 San Jose, Calif. 95150 **Catalog free**

With four dollars and one buck and less than \$85, you can eat good and in two years break even (if...you sell your surplus to a commercial dealer. A good way to live if you aren't a vegetarian.

T.G. Crouchman  
Spotswood, N.J.

## Books About Rabbit Raising

**Domestic Rabbit Production** George S. Templeton

**I Choose Rabbits**, E.H. Stall **Raising Rabbits**, Farmers' Bulletin No. 2131, U.S. Dept. of Agriculture, Office of Information, Dept. of Agriculture, Wash. D.C. 20505 20506

## Magazines

**National Rabbit Raiser**, 241 W. 5th Ave., Appleton, Minn. 56208

**Small Stock Magazine**, P.O. Box 107, Marshall, Wisconsin 53569

**The Rabbitman**, Auburn, Ala. 36830 36830

## Additional Booklets

**Commercial Rabbit Raisings** USDA Handbook No. 309, 70 pages, July 1966, Supt. of Documents, Wash. D.C. 20402, 30 cents.

**Rabbit Production**, USDA Bulletin No. 1730, 1960, 20 cents **Common Diseases of Domestic Rabbits**, USDA Bulletin No. 45-3



Litters range from 6 to 18 young, depending upon the breed, age of the doe, and the season. The ideal number to leave for the mother wean is seven. If you have two or more does kindling at the same time, litters can be balanced by taking youngsters from one mother and giving them to another on the first or second day after they are born. When the young are no more than 2 days old, neither doe will mind the transfer.

## Rabbit Raising

**\$0.45**

from: Boy Scouts of America New Brunswick, New Jersey



New Zealand Black (right)  
Ruby-Eyed White Polish (left)



## Sheep

I would like to spread the word about the joys of raising sheep. They require almost no work and very little money to care for. In return you get enough wool for yourself, your friends, as well as some extra wool; excellent manure for your garden (second only to chicken manure in nitrogen content), and, if you're into it, a cheap source of mutton or lamb which, like all home grown foods, is far superior to anything in the store.

In the winter, you'll need some hay, corn, and a shelter for them to sleep in. In the summer, you'll need nothing but a grassy field (they're great to trim the grass around your house). Also, since they can't reach very high and are unable to climb at all, they don't wreak destruction to all your small bushes and trees as goats do.

If you're interested in raising a small flock, may I recommend the Horned Dorset. They are a good breed for producing wool or meat and are by far the most beautiful of domestic breeds. The main practical advantage of the Horned Dorset is the high frequency of twins produced during lambing. They are able to lamb twice a year, so you can usually count on three or four lambs a year from each ewe.

## Rambling Rabbit Rap

I spent most of this past summer with a farmer friend of mine who raises rabbits as a main source of table meat for his family. Six does and a buck kept him busy at the edge of the garden producing regular meat for his family of four. Other than the heavy work of removing the manure as it accumulates, the rabbits are in the care of my friend's twelve-year-old daughters, who feed and water them as part of her daily chores. Her father does the slaughtering, the young rabbits mature. The meat is kept in the freezer, and eaten at the rate of about one, sometimes two, a week.

I'd tasted wild rabbits before, but I didn't remember much about it, except that the occasion was loaded with an atmosphere of self-sufficiency. I was a kid at the time and I don't remember who the adults were, cooking and serving the meat. But I do remember the almost compulsive talk that went on among them about how wild rabbits were sometimes dangerous to eat, about how we probably ought not be eating this one, but let's just take a bit of him anyway, and see. I took my bite, but what I tasted was the general mingling about the whole thing. And those minglings stayed in my head for 25 years, until this very summer when we were eating rabbit as a regular staple.

And it was great! It was at least as good as fried chicken, and maybe even a little better, depending on whose chicken you've been eating. My friend said that as far as the work of meat-production is concerned, rabbits are far less trouble to keep than chickens. He keeps chickens, but mainly for the eggs (for raised beef and pork too, as well as a fantastic organic garden, all on twelve rather hilly acres. Working together, he and his wife and their two children can grow as many as I know to tolerate organic self-sufficiency).

We talked some about the question of animal slaughter, and killing other creatures to feed on them. He said that in the beginning he had some trouble killing his rabbits, but that he finally overcame it when he quit thinking of them as "bunnies" and looked upon them as simply a source of protein. That attitude will no doubt trouble the more committed vegetarians; but not many farmers putting in 10 and 12 hours work a day are vegetarians. If a rabbit is to follow, bring, so is a corn stalk, a creature that creates. Some day worms will eat us all, and whatever debt we may owe the carbon-nitrogen cycle will no doubt then be paid in full.

So we went our dialogue. Or one chapter of it, anyway. One of the great things about the summer on the farm was the kind of running conversation we had, picking up down and even days later when the talk left off before. Farmers certainly work a good deal more than they talk, but when they do talk, it's grand to listen in. The language of men working together in a field is a rare and special thing. Men who work together, summer after summer, for years, have a common body of lore, a mutual frame of reference that underlies everything they say. When its best is when the words begin from a concrete subject, rise into a grand abstraction, conclude a time or two then return to earth again. Our talk about rabbits was like that. We talked about them as "bunnies," against rabbits as food to eat. That got us into talk about the exotic loveliness of a wagon wheel as a thing you paint and display in your front yard, against the loveliness of a wheel on an actual wagon that's helping you do the work necessary to your livelihood. Then we got into the difference between vocation and avocation, of the unhappiness that comes when a person's play is too far removed from his work. Raising rabbits is play, it's fun, a hobby. But it can also be work, good, productive work of the kind that contributes to health and vigor by getting good home-grown food on the table.

And so we got into the organic life as an ideal, a life in which opposites like "work" and "play" are reconciled. When your life is one of daily, personal "creation," of work that satisfies the play, does, you're less in need of purchased, artificial recreation. The average industrial worker does a job that hates to enter to buy the things he loves, like food, and entertainment. His vocation is one thing, his avocation another, and never the twain shall meet. This split ultimately leads to the deadly division between city and country. And in the same way the modern vocation, or industrial job, is deadly to the individual worker's creative spirit, the city has become the deadly enemy of the countryside. To satisfy the appetites of the city, the countryside is pillaged by industrial, mechanized farms for food and strip mines for fuel for electric power. How neurotic, how divided our culture against itself!

And thus we came to the question, can the lovely rabbit possibly come to the rescue? It couldn't it could. Rabbits can be raised in any back yard, as food, primarily, but they can also be raised as a metaphor of a new and simultaneously old possibility of the sustainability of cottage economy. They can be raised as a metaphor of opposites reconciled, of cultural schizophrenia overcome. They can stand as an image of country style happening in town, of town style stretched to embrace country suburbs, of work become play and play become work, which, after all, is not far from Adam and Eve's setup in the Original Garden. I don't plan to hold my breath till the Golden Age arrives. But I do plan to enter more fully in my suburban backyard this year, and to eat the little morsels one by one when they are grown.

—Curmy Norman



I think a small flock of horned Dorsets would be an invaluable addition to any agricultural community. For free information on raising sheep and brochure for Horned Dorsets write: William Gratzke, Pavilion, N.Y. 14525.

Yours truly,  
Ned Nisson  
Pavilion, N.Y.

## Stromberg's Chickens

For non-killed protein nothing beats milk and eggs. For ordinary chickens go to local sources. For fancy chickens, chickens, fancy ones, and geese, ducks, pigeons, turkeys, partridges, peacocks—Stromberg's.

## Stromberg's Catalog

Free

from:  
Stromberg Hatchery  
Fort Dodge, Iowa

## Genuine CANADIAN HONKERS

### THE PRIDE AND JOY OF SPORTSMEN

You and your friends will be invited to see a pair or more of these beautiful Canadian honkers about your country place. They are also a challenge to the devoted and dedicated waterfowl collector. Matter to be said only their choice of music is a very serious matter with them. While they mate for life, should one die there is a chance they will take another mate. \$10.00 per pair plus tax. They never leave another male—especially older stock. These honks exceptional fine life, and have been known to reproduce up to 40 years of age, with some attaining an age of 85 years. Those listed in the American Standard of Perfection to encourage exhibitors, they are in a domestic but a truly wild fowl. A Federal Permit is required to ship.

### STANDARD WEIGHTS

Adult Gander	12 lbs.	Young Gander	8 lbs.
Young Gander	8 lbs.	Adult Goose	10 lbs.

### HOW TO OBTAIN A FEDERAL PERMIT

There is no charge for the Federal Permit to raise Muscovy Fowl such as the Canadian Honkers, Blue and Snow Geese. In the event you do not have this permit, write for your application to: U. S. Department of Interior, Fish and Wildlife Service, Bureau of Fisheries and Wildlife, 1000 West Lake Street, Minneapolis 8, Minnesota, or the same Department in Washington, D.C.

Royal Palm Tom

## Farm Horses

The best way to learn about farm horses is to work with some horses who use them, if you're still curious, try this British handbook.

## Farm Horses (and other English farming handbooks)

47 pp.  
Three shillings sixpence plus postage

from:  
National Federation of Young Farmers Clubs  
National Agricultural Centre  
Kenilworth, Warwickshire CV8 2LE  
England

In many stables it is the custom during the winter to give the horses a bran mash, in place of the usual bait, once a week. This is usually done on Saturday evening before the Sunday rest. The purpose of this is to clear the horses' bowels (for a bran mash is laxative) and to lighten the diet at the weekend when there is less work for the horses to do. For 1 horse are half at work and are being lightly fed on oats, maize, beans or similar concentrates, they may become very ill indeed if their work suddenly stops and their rich feeding continues. The concentrates must be reduced and grain given as a mash instead. Horses have died as a result of the wagoner neglecting to reduce their feed in this way.

## Horseshoeing

where a grew up they didn't shoe horses, ground was so sandy that they didn't need to, horseshoes were used for pitching at stakes after the picnic. this book tells how to shoe horses.

[Suggested by Roberta Becker Marshall]

Horseshoeing  
A. Ljungvist  
1966, 216pp.

\$6.00 postpaid

from:  
Oregon State University Press  
Corvallis, Oregon 97331

WHOLE EARTH CATALOG

### HORSeshoeing

The object of shoeing is—

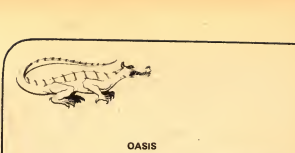
1. To protect the hoof from excessive wear, and thus render the horse continuously serviceable upon our hard roads.
2. To prevent slipping and falling during the winter season.
3. To so far remove the disadvantages of faulty positions of the limits that horses may render good service, and, in some cases,
4. To cure or improve diseased or defective hoofs or feet.

Horseshoeing, though apparently simple, involves many difficulties, owing to the fact that the hoof is not an unchanging body, but varies much with respect to form, growth, quality, and elasticity. Furthermore, there are such great differences in the character of ground surfaces and in the nature of horses' work that shoeing which is not performed with great ability and care induces disease and makes horses lame.

Working mare are more apt to conceive than the fat and idle, while a working stallion will often succeed in impregnating mares which have proved barren to several successive sires; this is one of the reasons why farmers use an indifferent sire in their own neighborhood, instead of a high-priced animal who leaves no neighborhood. The method of trying a mare over a gate, and the conclusions arrived at, are not always reliable, as in the case of a mare the winter had, and for whom a suitable he took the not be found, till chance to meet a friend's cob, he took the mare out of harness and got her covered in a neighbour's barn, much against her will, with the result that she brought a splendid foal, and 7 days afterwards conceived to another horse. The 9th day after foaling is very generally agreed to be the most successful time for impregnation, and the case mentioned is to show how great this is a departure from the received traditions of breeders is yet consistent with impregnation. This little mare both occasions resented the visit of the sire, was at one time stunted, yet proved a most jealous mother and brought up both foals. The mare fact of a stallion coming through the village was the sole reason of her being served on the 7th day.

SPRAIN

Fig. 69. Examination of the hocks from a side shoulder. The neck (left) hock is 'sprained'.



## OASIS

Estelle had been driving since about two in the morning and by ten she was exhausted. She might have been able to go another hour or two if she hadn't drunk the beer she'd swigged from the Lone Outdoorsman the night before. But she did, and it wiped her out completely. Divine Right had been in a trance for over an hour now, but she couldn't spare the energy to worry about him yet. She felt it was a major achievement just to get up off the freeway into the little town of Lone Oak before she passed out at the wheel. Her neck and back were killing her, and she could barely keep her eyes open to look for a Chevron station. She had to find a Chevron station because they were traveling on the Anaheim Flash's credit card, and they only had three dollars and a quarter left out of the twenty dollars they'd set out with. Lone Oak was just a one-lane road on a two-lane road, but if it had a Chevron station it would be an oasis indeed. Estelle held her breath as she slowly crawled the street. At last she saw the blessed red white and blue sign, and gratefully pulled up under the canopy.

"Good morning miss, how are you today?"  
The service station man was an older fellow who walked with a limp, but he gave off the nicest vibe Estelle had found at a station in more stops than she could remember. As soon as he got the gas pump going he went right to work scraping bugs off the windshield and checking Urine's tires. Estelle was so used to taking care from service station people the old fellow's manner made her want to just stop the trip and hang around the station all day. Or even just live there, she thought. God, would I ever like to have a nice, clean service station call my home town over, ever more. Her sense of welcome, and relief, was so complete she decided to celebrate and blow fifteen cents on a Coke.

"Don't drink the stuff," a man's voice behind her said. "Try some of this."

Estelle turned around to face two friends, a man in a Greek athlete costume and a girl in a drab outfit of dirty jeans and work shirt with the tail hanging out. Her expression was very sassy. She looked a little older than Estelle, but her eyes were so wild it was hard to read anything very definite in her face. After she'd looked Estelle up and down, she turned and sat on the curb in the lotus posture and stared off into the east. The Greek, however, stayed right there with Estelle, looking into her eyes very intensely, smiling broadly as he held out a small brown bottle of stuff for her to drink. Estelle glanced at the bottle, then up and down at the girl's costume. He had on a white top, a leather thigh for a belt, leather sandals that laced up to his knees, and a leather band around his upper arm. Estelle disliked him immediately, although she wasn't exactly sure why.

"What is it?" she asked.  
"This dear, is acidophorus," said the Greek taking the lid off his bottle.

"Is this what acidophilus was."  
"Yes, it's the source of your going good on your tummy. People have been drinking it since before recorded history. You really ought to try some."

Estelle asked if it got you stoned.  
"Absolutely," said the Greek. "It stonies you on health, vigor and enthusiasm for the pure-fest of life."

Estelle nodded and said no thanks and turned around to buy her Coke. The Greek pleaded with her not to buy the Coke, and when she went ahead and bought it anyway he lectured her on its evil properties as she drank it. To hush him, Estelle asked if they were traveling.

"Oh yes," said the Greek. "By all means, we are traveling. We are traveling along the Middle Way enroute to a land where nothing has a name. And we'd also like to get to Oklahoma City, if you happen to be going that way."

"Can you drive?"  
"Drive like a champion," said the Greek. "I have many talents for the many circumstances, situations and occasions one encounters as he journeys along the Way. I've also got some good food in my bag here, in case you happen to be hungry."

Estelle positively disliked the Greek by now, but she knew she was going to give the people a ride and so she tried to come on to him as neutrally as she could. If he would drive and let her rest it would probably be okay. Ideally Estelle would have liked to simply pass out and wake up in St. Louis some time during the night, but she knew that was too much to hope. An hour or two of sleep while they made a few more miles was the realistic prospect, but it was enough. She told the people to go over to the bus, that she'd be there as soon as she went to the bathroom.

"Who's that in back there?" asked the Greek when Estelle got back to the bus.

"My old man. He's a little strung out right now, but he'll be all right. You ready to drive?"

"Who pointed this thing?" asked the Greek's girlfriend. Her name was Frieda. It was the first time she had spoken since she was somewhat belligerent in her tone, and for a second it pissed Estelle off. But when she looked at Frieda again her anger went away and turned to something soft and pity. Something about her eyes, what was it? She looked so lost, so far away in her mind. As gently as she could, Estelle replied, "Different people."

"Different people, huh?"  
"Yeah. You know. Friends."

"Friends, huh."

Estelle nodded and said yeah, and turned to pay the man for the gas and oil.

"Goodbye," Estelle said to the Chevron man. "I really enjoyed your station."

"Stop in again," said the man. "All of you, come back and see us, you hear?"

The Greek started Urine's motor. Estelle crawled in back and stretched out next to Divine Right. By the time they were on the freeway again, she was sound asleep.

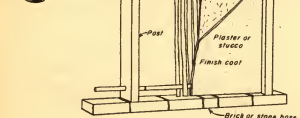
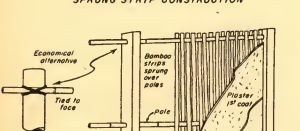
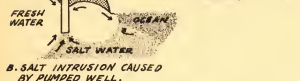
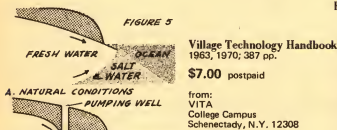


## VITA

Volunteers for International Technical assistance is the only source of specific practical information on small-group technology and non-industrial farming that we've found. But what a source. Find here how to make the tools that make life. Well digging bits, glue, no-ice refrigerators, water purifiers, water wheels, well construction, plows, water lifters, stoves, washing machines.

Functional.

-58



## New Sources of Energy

Well, they aren't new sources; they're the oldest: sun, wind, earth heat (geothermal). But OK, to us they're new, and indeed they're exciting. The prospect of truly self-contained habitable energy systems is romantic country. There you are with your friends on your hill putting sun and wind through useful changes that are not only apparent to you but an integral part of your living.

Michael Rosenthal first tipped us to this remarkable set of U. N. documents which arose from a conference in Rome in 1961. If you're deeply into solar or wind energy there's lots of stuff here unfindable elsewhere. Japanese solar pillows—simple elegant water heaters up on the roofs, thoroughly described in volume five. Traditional Dutch drainage windmills with suggested adaptations for other early technology applications in volume seven. And so on. A trove.

[Suggested by Michael Rosenthal]



Solar Water Heaters in Japan

## The following publications are available from:

VITA  
College Campus  
Schenectady, New York 12308  
U.S.A.

VITA Views, 4 pages. Reports on VITA activities, describes "finished problems," lists selected unanswered technical requests and personnel openings. Available free on request.

Village Technology Handbook, 400 pages. 1970. \$7.00 (includes first-class postage).

## Rural Technology Manuals

Smoking Fish in a Cardboard Smokehouse—9 pages. 1966. 154

How to Salt Fish—10 pages. 1966. 154

How to Salt Fish—10 pages. 1967. SPANISH. 154

Making Building Blocks with the CINY A-Ram Block Press: A Supervisor's Manual—21 pages. 1966. 454

Making Building Blocks with the CINY A-Ram Block Press: A Supervisor's Manual—22 pages. 1966. SPANISH. 454

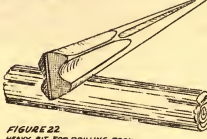
Low-cost Development of Small Waterpower Sites—43 pages. 1967. 754

Fresh Produce Handling and Distribution—11 pages. 1968. 154.

Small-Scale Manufacture of Burned Building Brick—12 pages. 1970. PORTUGUESE. 754

Chalk Stick Making—27 pages. 454

Playground Manual—33 pages. 1969. 754



## Tools and Materials

Mild steel bar: about 7 cm (2-3/4") in diameter and about 1.5 meters (5') long, weighing about 80kg (175 pounds)

Stellite (a very hard type of tool steel) insert for cutting edge

Anvil and hammers, for shaping

Steel rod: 2.5cm x 2cm x 50cm (1" x 3/4" x 19-3/4") for bail

Welding equipment...

## Drilling Mechanically

A method for raising and dropping the bit mechanically, not used on the project but used successfully elsewhere, is:

1. Jack up the rear wheel of a car and replace the wheel with a small drum.
2. Take the rope which is attached to the bit and come from the tripod on the pulley and wrap it loosely around the drum.
3. Pull the unattached end of the rope taut and set the drum in motion. The rope will move with the drum and raise the bit.
4. Let the end of the rope go slack quickly to drop the bit.

It will probably be necessary to polish and/or grease the drum.



## Proceedings of the United Nations Conference on New Sources of Energy

\$2.50 Volume One (General Sessions)

\$5.00 Volume Two (Geothermal I)

\$5.50 Volume Three (Geothermal II)

\$7.50 Volume Four (Solar Energy I)

\$4.50 Volume Five (Solar Energy II)

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Sales Section  
United Nations  
New York, New York 10017

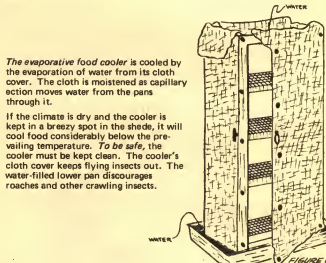
or WHOLE EARTH CATALOG

VITA's International Division offers technical assistance specifically to those in developing countries overseas. We solve problems by mail for foreign nationals sometimes directly with the nationals, sometimes through Peace Corps, AID, CARE, United Nations and other groups. Our services are free.

VITA's USA Division offers technical assistance to poverty programs within the United States. In addition to by-mail assistance, VITA-USA offers a great deal of on-site consultation. There is no charge to a requester for such assistance. VITA-USA determines the eligibility of a requester by considering whether or not the project is a self-help project and the inability of a requester to purchase the assistance needed.

We distribute VITA publications to people in the United States on an at-cost-plus-postage basis. We constantly receive nickels and dimes for publications that cost more than the ad states and we would appreciate those who are interested to write us for a publications list. The Solar Cooker Construction Manual is out of print and no longer available.

Terry Ladd  
Publications Specialist



The evaporative foot cooler is cooled by the evaporation of water from its cloth cover. The cloth is moistened as capillary action moves water from the pans through it.

If the climate is dry and the cooler is kept in a breezy spot in the shade, it will cool food considerably below the prevailing temperature. To be safe, the cooler must be kept clean. The cooler's cloth cover keeps flies insects out. The water-filled lower pan discourages roaches and other crawling insects.

## Solar Stills

Solar stills purify seawater, hard or brackish water using heat from the sun. Sunwater Co. has done extensive work in Baja California, in one case providing drinking water for a home 200 miles from the nearest source of fresh water.

The Solarstill is a small unit, primarily designed as a host water purifier.

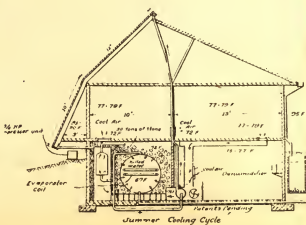
—Lloyd Kahn

from:  
Sunwater Company  
10404 San Diego Mission Road  
San Diego, CA 92129

## Solar House

Page 38 of the Fall 1970 Whole Earth Catalog shows the interesting and useful books United Nations Conference on New Sources of Energy. I felt that figure 1 on the same page labeled "a cross section of a solar heated house" was an unfortunate choice of diagrams. I saw the diagram and thought, "Wow, a solar heated house!" Went to the library, found the books and eventually found the article from which the diagram was taken. It was not a real solar heated house but was a model of one used by a group of Canadians for studying various problems involved in solar heating. All this is rather petty but what I'm trying to say is that there is, from a different article, a diagram (have enclosed a copy) that would arouse more interest because it is a cross section of a real and practical solar heated house. This solar heated house in Washington, D.C., built by Harry E. Thomason in 1959, (he has since built others) required only \$11.05 worth of auxiliary fuel for the years 1959-60.

Jack McKee  
Portland, Oregon



## Windmills & Watermills

Lots of good ideas if you are building a windmill or water-wheel. But no plans and few really useful details. Historical approach, beautifully done, and expensive. Get your library to order it.

[Reviewed by Fred Richardson]

## WINDMILLS & WATERMILLS

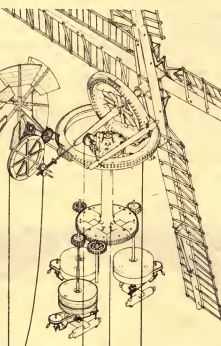
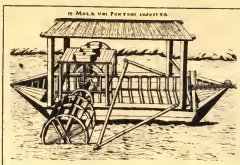
Windmills & Watermills

John Reynolds  
1970: 196 pp.

\$13.95 postpaid

from:  
Freight Publishers Inc.  
111 Fourth St.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



The working surfaces of the stones required careful preparation, and skilled stone dressers were craftsmen in their own right. When dealing with a new stone it was necessary first of all to produce a perfectly smooth surface. A laminated wooden straight edge was used with 'raddle', a composition of red oxide, to detect the high spots, and these were rubbed down with a fragment of burr stone. An extraordinary degree of accuracy was required, and achieved, in this operation. The dresser tested the edge of his wooden staff from time to time against a proof staff of cast iron, which was kept carefully protected from damage in a wooden case. The final aim was to achieve a surface very slightly dish, or hollowed, towards the central axis, ready to receive the system of 'furrows' which performed the actual operation of grinding. These were set out in patterns established through years of trial and error to suit the particular use to which the stone was to be put. In common dressing, the surface was marked out into ten equal 'harps' or sectors, divided not by true radii, but by lines drawn at a tangent to the eye of the stone. This basic method of division, to be seen on Roman millstones, was to remain in use until the end of the traditional corn mill. Each 'harp' was subdivided into alternate 'furrows' and 'furrows', the latter cut to a depth which varied between one half and three quarters of an inch, and finished with a sharp aris on one side, an even slope up to the 'lend' on the other. Finally a system of fine parallel grooves, the 'stitching' or 'cracking', was added to the surface of each land, a process calling for both skill and precision, experienced men being able to cut as many as 16 'cracks' to the inch. The dressing was so arranged that when the stones were in their working position, face to face, the 'furrows' crossed at each revolution, cutting the grain with the action of scissor blades. As the stones became dulled with wear they ceased to grind efficiently, and frequent re-dressing was required. This involved the deepening of 'furrows' and the renewal of 'stitching', and with a pair of French burrs, might become necessary every two or three weeks.

## Wind and Batteries

I would like to comment on a comment on p 39 January (I think) p 7 March Re: small power plants for electricity generation.

The plants (wind) I've seen in operation all used banks of storage batteries. These batteries of the common lead acid type used in cars will last several years more than usual if taken care of. I recall a rancher saying the company who sold him the system guaranteed the batteries 10 years; lots of technical data is available on batteries since telephone exchanges use them for emergency power.

The use of batteries with either water wheel or wind generation systems allows large power output with only a few watts charging on the average thousands of watts can be drawn intermittently.

Car alternators can be used for either water wheel or wind installations; I recall seeing that VITA was working on such. They also had a design for a wind type which had a propeller made by cutting a 55 gallon drum along its axis and then offsetting the halves so that it became a two cup anemometer like rotor (I don't know how successful this was but suspect they had been starting up problems when the wind died down all the way). When you use a car alternator you can use the regulator to keep the battery charged correctly too. The maximum output of a car alternator is in the 300-600 watt range.



On large wind plants flywheels have been used to store energy between gusts to make the whole thing efficient several transmissions must be used and it's pretty complicated.

I think the aesthetics and ecology make gasoline fired power plants unattractive. Rural electric lines not only cost extra money but often there is a line building charge on the order of a dollar or more per foot. A single auto battery will store enough to run a 40 watt fluorescent lamp 10 hours; or a small radio transmitter etc. Don't expect wind fired plants to run the electric heaters and other garbage. Washing machines are made with gasoline engines, refrigerators are made to run on kerosene. Solar electric cells are still to expensive (unless you happen to run into a cheap NASA throw out). We should all learn to live with less power use. Even if it is superficially cheap.

By the way on propane engine conversions I found a handy technical book a few months ago; a little dated but lots of good info for the initiate:

"Butane Propane Power Manual" Principles of LP Gas

Corburation, by Carl Abell, William Kier, ed; Chilton

Publishing Co., 401 Walnut St., Philadelphia, Pa. 19106

1962, \$5.00, 300 pp.

This book covers planning of engine conversions and specific available equipment in considerable detail for those who dig mechanics.

I'd be happy to try help with small generator problems but I don't know anything much about propane conversions. Less power to you.

John K. Green  
Boulder, Colorado  
P.S. Windmills still used a lot for water pumping.

## Dunlite

Australian wind-driven electric plants, wind chargers. A wide variety of wind generator equipment and appliances. They need detailed information on your wind situation and power needs before they can quote a price for you. Write to: F. W. Davey & Co. Pty. Ltd.

Box 120  
Oakleigh,  
Victoria, 3168  
Australia



Three-blade, wind-driven power plant fitted with Automatic Variable-pitch Propeller. Two models available.

## Solar Devices

How to Make a Solar Still (Plastic Cover), by A. Whillier and G. T. Ward, 9 p., January 1965. \$0.75.

How to Make a Solar Steam Cooker, by A. Whillier, 6 p., January 1965. \$0.75.

How to Heat Your Swimming Pool Using Solar Energy, by A. Whillier, 2 p., January 1965. \$0.40.

How to Build a Solar Water Heater, by D. A. Simon and T. Head, 10 p., February 1965. \$0.75.

How to Construct a Cheap Wind Machine for Pumping Water, by A. Bodek, 12 p., February 1965. \$0.75.

How to Make a Solar Cabinet Dryer for Agricultural Products, by T. A. Lawand, 9 p., March 1966. \$0.75.

Instructions for Constructing a Simple 8 Sq. Ft. Solar Still for Domestic Use and Gas Stations, by T. A. Lawand, 6 p., revised September 1967. \$0.75.

Plans for a Glass and Concrete Solar Still, by T. A. Lawand and R. Alward, 9 p., December 1968. \$3.00.

from:  
Broac Research Institute  
Agricultural Engineering Bldg.  
McDonald College  
McClint University  
Montréal, P.Q.  
Canada

## Wind Generators

Two U.S. sources of wind generating equipment, less sophisticated than Quirk's.

Bucknell Engineering Co.  
10717 E. Bush St.  
South El Monte, California

Dyna Technology, Inc.  
P.O. Box 3263  
Sioux City, Iowa



## THE GREEK'S FIRST RAP

As soon as the bus began to roll the Greek launched into his first monologue of the day. It was actually his tenth one, but the first Divine Rapt had heard, and it blew into the middle of his acid high like a rock band showing up at your house for supper. Estelle was so sleepy the words merely pricked her awareness, like flies flitting about on her skin, but the words were like sudden good music to D.R.'s mind. They energized and charged him up at the same time they smoothed out his waking, day-long dream. D.R. had never heard a voice like the Greek's before. He'd never heard anyone speak that confidently that rapidly. The rap was two or three minutes old before D.R. even realized that a strange man and woman had taken over the bus and was driving them away. If it had been a silent fellow mysteriously behind the wheel, acid-paranoia would have overwhelmed and terrified D.R. But this was a talker, a speaker, and D.R. trusted him implicitly. For a long time he lay there next to Estelle, taking in the Greek's words as he would a song. But he felt like moving about, and although he was weak and shaky he made his way to the front of the bus and situated himself on a box of stuff just behind the front seats. "What I envision," the Greek was saying, "is a world entirely free from mucus. I'm convinced that if mucus can be overcome then everything else will fall into place. War. Poverty. Racism. All second-level stuff in the gross dimension, and absolutely avoidable if people would only give up their attachment to mucus-making foods."

"Now I know a lot of people are on a dairy-protein trip. You hear about yogurt, cheese, eggs, and brown rice these days. And it's true that protein is essential, but what's got to happen is that people must quit accepting mucus as the price of protein in their bodies. As any one who has studied the acid and dietary habits of the ancient civilizations can tell you, these lots of protein tend to build in non-mucus-making foods. But the thing about people in the west is nobody's interested in what he eats, now, let alone people in ancient cultures. Since the industrial revolution, people have become mere spectators of their own lives eating what's sold to them, thinking what's told to them, never giving a thought to life after the arbitrary cut-off-point the mucus propagandists have established as healthy. In fact, mucus is considered extremely old in places like the United States. It's due to nothing other than the American mucus conspiracy, business men, capitalists, money-mongers the lowest order, it's to make money peddling food that causes mucus to cause people to die when they're about seventy-five or eighty."

Wind & Sun  
Land Use

69



## Sanitation and Health

The World Health Organization publishes three excellent books on water supply and waste systems.

**Excreta Disposal for Rural Areas and Small Communities** is 189 pages of privies, latrines, and septic tanks. It's a book for health officials, and gives good information on out-house-type waste disposal, as well as water-carried methods (5 gallons each flush).

The most complete information we've seen on building a methane generator is in the book **Composting**, which devotes a whole chapter to the subject. Manure and shit are placed in a sealed tank, and the anaerobic decomposition produces methane gas, which can be used for heating, cooking, lighting, and to power small engines.

The book deals with the reclamation and recycling of wastes, explains the decomposition of organic matter, and stresses the importance of sanitation in the process.

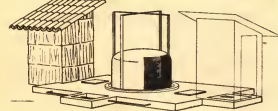
[Suggested by Craig Schensted]

A few years ago, I spent some time looking for a good book on water systems and couldn't find one. Water Supply for Rural Areas and Small Communities was just what I was looking for. Excellent information on wells, pumps, distribution systems, developed springs, and treatment.

The World Health Organization publishes this book and apparently directs it toward underdeveloped areas. Some of their reasons for not recommending certain methods and equipment for outlying areas seem to me to be applicable to developed areas. For instance, treatment is recommended only as a last resort because of the necessity for trained operators and often expensive equipment. They have found many cases of impure water in communities where treatment was supposedly taking place, but for one reason or another, wasn't happening. Often, no one worries about water pollution if the water is being treated.

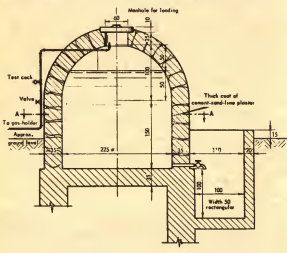
Many of the methods and equipment described are not much used in the U.S. There is very good information on low cost wells. Hand dug, drive point, and jetted. Also information on hand pumps.

[Reviewed by Fred Richardson]



SKETCH OF MANURE GAS PLANT WITH LATRINES

The use of anaerobic digestion of organic waste materials, such as farm manure, litter, garbage, and nightsoil, accompanied by the recovery of methane fuel, has been an important development in rural sanitation during the past 10 to 15 years. This development is basically an extension of the anaerobic process for sludge digestion used in municipal sewage treatment to small digestion-tank installations on farms. These farm plants comprise one or more small digesters and a gas-holder. Manure and other wastes are placed in a tank which is sealed from atmospheric oxygen, and are permitted to digest anaerobically. The methane gas, which is produced during the anaerobic decomposition of the carbonaceous materials, is collected in the gas-holder for use as fuel for cooking, lighting, refrigeration, and heating, and for other domestic or agricultural purposes, such as providing power for small engines.



CROSS-SECTION OF INDIVIDUAL DIGESTER UNIT

Attention: Communes, extended families, groups, tribes, families, loners

## PEOPLE

Subject: Health / Sanitation or Sanitation & Health

It is rapidly becoming clear that if we do not pay attention to some basic facts about health & its relation to sanitation we are going to have some problems. These problems will not/cannot & won't go away. Neither can we. There is no where to go. People thru out time/space have all ways had to deal with these problems.

## SO

People eat food which maintains body which rejects what it can't use as waste.

What to do with it OR How to get rid of it

The easiest way is to leave it where you laid it. Problem: someone else has to cope. Don't pass your load on. We are all one. What's yours is mine. An other easy is to put it in the river/stream/ditch. You're still passing on your load. Remember water equals life. Who wants to drink water with yr. load in it. There is a good solution: put it in the ground. Give it back to mother nature; she can use it (Nitrogen, etc.).

[Part of a notice from Lama Foundation by Steve Durkee]



Composting  
Harold B. Gotos  
1956: 205 pp.

\$5.00 postpaid

**Excreta Disposal for Rural Areas and Small Communities**

E. G. Wagner & J. N. Lanox  
1956: 187 pp.

\$5.00 postpaid

**Water Supply for Rural Areas and Small Communities**

E. G. Wagner & J. N. Lanox  
1956: 340 pp.

\$6.75 postpaid

all three from:  
The American Public Health Association  
1740 Broadway  
New York, N. Y. 10019

or WHOLE EARTH CATALOG

A reasonably safe way for a villager to prepare excreta for use as fertilizer is for him to compost it in a privy pit. After the required period of composting, the pit can be emptied, thus eliminating the handling of the raw excreta. . . .

1. Dig a pit of required size, the bottom of which should always be above ground-water level.

2. Before the slab is placed, cover the bottom 50 cm (20 in.) of the pit with grass cuttings, fine leaves, garbage, paper, etc., but allow no rubbish such as metal cans, glass bottles, or similar materials to be deposited there.

3. Place slab, and complete superstructure, keeping in mind that they will both be moved periodically to another site.

4. In addition to depositing human excrement, throw the daily garbage into the pit, along with cow, horse, sheep, chicken, and pig manure, as well as urine-soaked earth or straw. The latter materials are important, as urine is rich in nitrogen, an essential plant nutrient.

5. About once a week throw a few kilograms of grass clippings and fine-texture leaves into the pit. After some experimentation, one can arrive at a pit mixture which will provide a good fertilizer.

6. When the pit's contents reach a level of 50 cm (20 in.) below ground, a new pit is dug 1.50-2 m (5-6.5 ft) away (more if desired), and the superstructure and slab are moved over it. The first pit is leveled, finally, with 15 cm (6 in.) of grass clippings and leaves, and the top 35 cm (14 in.) with well-tamped earth.

7. When the second pit is filled as indicated above, the first pit is uncovered and the compost removed. It should be stable and will provide a good fertilizer which can be applied immediately to the fields or stored. . . .

Before applying or recommending this method in a rural area where it is not familiar, it is desirable to try it first on a pilot scale under adequate control in order to determine the proper operating schedule and materials suitable and available in the area under consideration. The collaboration of agricultural officials and of local leaders among the farmers of the area is necessary.

Excreta Disposal

Fig. 33. PROPERLY PROTECTED SPRING (H)



A Protective drainage ditch to keep drainage water a safe distance from spring  
B Original spring and ground line  
C Screened water pipe; can discharge freely or be piped to village or residence

Hand-dug wells naturally have certain limitations. While successful wells have been sunk in special circumstances to depths of over 120 m (400 ft), half that distance is usually considered the limit of practical sinking.

The first consideration, then, in designing a well is its diameter; neglecting for the moment large-diameter wells built for special purposes, the size of a completed well represents a compromise between economic and practical considerations. It has been found that the cost of a lined well varies almost exactly with its diameter, taking into account the increased thickness of lining necessary in a larger well. The minimum diameter is limited by the room available for a man or men to work; experiments show that a diameter of about 1 m (33 in.) is necessary for one man and about 1.3 m (43 in.) for two men. It has been found that the efficiency of two sinkers working together is more than twice that of a single man, and consequently a 1.3 m (43-in.) diameter is a convenient standard size. Other considerations affecting this decision are the greater natural ventilation of the larger hole, the more efficient size of the k-bobs (hoisting buckets) and other equipment which can be used in it, the additional room for concreting operations and insertion of caisson rings, and the possibility of using orange-peel grabs if desired. On the other hand, an increase in diameter beyond 1.3 m (43 ft) does not appear to give any great constructional advantages.

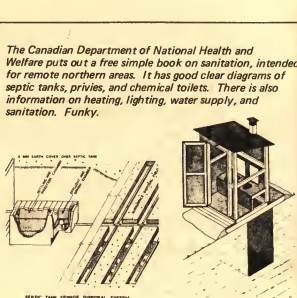
The quantity of water from a spring can very often be substantially increased by digging out the area around the spring down to an impervious layer to remove silt, decomposed rock, and other rock fragments and mineral matter (usually calcium carbonates) some times deposited by the emerging ground water. In doing this, particular care should be taken, especially in fissured limestone areas, to avoid disturbing underground formations to the extent that the spring is deflected in another direction or into other fissures.

Energy which Nature has provided, such as the wind, should be taken advantage of whenever possible. In the Northern European and Western Hemisphere countries, wind energy is used for pumping water for farms, homes, and small communities. This method is excellent for obtaining a steady flow of water from a well at a very low cost.

For proper operation, the following conditions must be met:

- (1) winds of more than 8 km per hour during at least 60% of the time;
- (2) available windmill equipment;
- (3) wells that can be pumped for many hours' duration each day;
- (4) storage capacity of three days' supply (or more) to take advantage of long pumping periods and to provide for calm periods when there is no wind;
- (5) clear sweep of wind to the windmill. This can be obtained by the use of a tower to raise the windmill 4.5-6 m (15-20 ft) or more above the surrounding obstacles.

Water Supply



Sanitation Manual for Isolated Regions  
1967: 64 pp.

from:

Department of National Health and Welfare  
Ottawa, Ontario, CANADA

## Well Drilling Operations

The Army has done it. A good cheap book on wells. The most useful parts are on auger-bored, driven, and jetted wells. Covers percussion and rotary drilling with military equipment. Useful section on well development and redevelopment of old wells, testing for yield and recognition of strata.

Even a section on "Arctic Methods of Well Construction" (jet with steam!).

The WHO Book on water supply (p.72) has much better information on dug wells and spring development.

[Reviewed by Fred Richardson]

Another simple method of testing is to pour water into the well. If the well point is in dry sand, all of the water added will drain into the sand. If the well point is in water-bearing sand, the added water also will seep out but only to the static level or the water table elevation. When the well point is in water-bearing sand, the quantity of water that can be poured into the well continuously is a rough measure of the rate at which the well can be pumped, since the saturated sand yields water about as freely as it absorbs it. Sometimes raising or lowering the well point a foot or more brings a greater length of the screen into contact with the water-bearing sand and a greater yield results.

**Well Drilling Operations**  
Army & Air Force Technical Manual  
TM 5-257 AFM 85-23  
1965; 249 pp.

\$1.00 postpaid

from:  
U.S. Government Printing Office  
Division of Public Documents  
Washington, D.C. 20402  
or WHOLE EARTH CATALOG

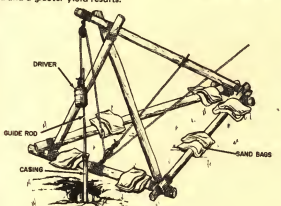


Figure 28. Expedient support for driven well.

b. In constructing bored wells, small rocks or boulders may be encountered that will prevent further penetration. When this occurs, lift the auger from the hole, remove the cutting bit, and replace it with a spiral or ram's horn auger. This tool is then lowered into the hole and turned in a clockwise direction. The spiral will usually regular bit is then replaced and boring continued. If an extremely large boulder is encountered and it cannot be removed with the spiral auger, the hole will have to be abandoned and another one started elsewhere.

## Rife Hydraulic Rams

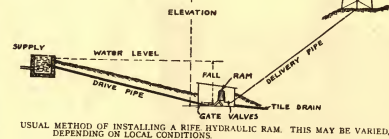
a mechanical magic way of pumping water.

[Suggested by Pete Schermerhorn and S. Hamill Horne]

Information

free

from:  
Rife Hydraulic Engine Manufacturing Co.  
Box 367  
Millburn, New Jersey 17041



USUAL METHOD OF INSTALLING A RIFE HYDRAULIC RAM. THIS MAY BE VARIED, DEPENDING ON LOCAL CONDITIONS.

## Hydra-Drill

looks like a good way to get shallow water, tap springs, bore blasting holes, priced around \$350.00.

—jd

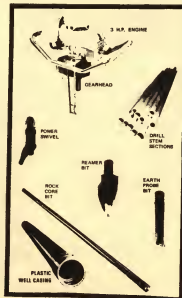
Information

free

from:  
Deesrock Manufacturing Co.  
Box 670  
Opelika, Alabama 36801

The HYDRA-DRILL is designed to drill water wells approx. 3 1/2" diameter and up to 200' deep. Because it is economical, portable and easy to use, many contractors and prospectors use it for coring and other test drilling.

The HYDRA-DRILL is powered by the latest model TECUMSEH 3 H.P. engine featuring needle bearings thru out. A thumb-bar throttle control affords total operator control. The rugged 36:1 gear reducer converts the 3,600 engine rpm to 100 rpm for the hi-torque required for hard drilling.



## Lefel Hydraulic Turbines

If you have a good head of water nearby, a creek, river, reservoir, dam, then you can build a electrical system powered by the water. There are homestead methods, and used turbines, but it helps if you understand what it takes to change the creek into a lightbulb. Lefel has been doing this industrially for a hundred or so years, but they also have single family systems. Ask for Pamphlet A and Bulletin H-49.

—jd

[Suggested by Pete Schermerhorn]

Information

free

from:  
The James Lefel Company  
Springfield, Ohio 45501



"Now I realize that not very many people can dig on this. But it's actually an established fact that our national leaders are dedicated to the promiscuous ethic. They consciously and knowingly intend people to get hooked on mucus-causing food as a means of keeping them in bondage and servitude, so they'll buy anything that promises to keep the specter of age eighty at a safe distance. You take the Food and Drug Administration, big time outfit, right? Big Federal scene up there in Washington. They're into mucus like the State Department's into hydrogen bombs. That's because the President's got these two big heavy numbers he's laying on people, hydrogen bombs and youth-cut mucus promotion as a means of subjecting the world—not just this country, mind you, that's old nineteenth century hat—but the whole entire world to a mucus-loving servitude. That's what's behind the eighteen year old vote shuck. And the Peace Corps. Big youth-cut mucus oriented shuck."

"It's like these friends of mine. I had these friends used to be in the Peace Corps, over in Africa, trying to turn the spades onto mucus. Stayed over there two years pretending to help the people, and all the time he was trying to get 'em hooked on mucus. And the poor people in Appalachia, down there in Kentucky, and West Virginia, and in the slums, giving away all those food stamps won't buy anything except a lot of party mucus-making food. And the Middle East. What do you think all that friction over in the Middle East is really about, if not mucus? A whole big goddamn mucus plot run right there in Washington, D.C. by the Food and Drug Administration. Trying to stop drugs that might help enlighten the people about the evils of mucus-making food, and promote mucus-spreading foods all because our national leaders are determined to stamp out their health and spirituality, and because they're against people getting old naturally and gracefully."

"Look at the state of old people in America. Look at what America reduces old people to. People in the western world are absolutely terrified of getting old. That's because instinctively they understand, although intellectually they reject it, that man's true sexual possibilities don't even begin till around the age of ninety. It's a fear of sex, and for sex read natural health and vigor, disguised as a fear of death. Shit. Do you know what the average life span was among the ancient Sumerians? A hundred and sixty-two years. The average, mind you. Their elders lived well over two hundred years, and death at a mere hundred was considered tragically premature. Those people knew, man. They knew about everything. Western people can't even conceive the kind of sex trip those dudes were into. Western people are fuck-gluttons, just like they're food-gluttons. Got to have it, got to have it, got to have it, and it's all just one big energy-wasting, mucus-oriented scam, shaped and defined and made into policy, as I say, by the American federal government, with the Food and Drug Administration as the principal architects. The Western idea is to get people to ball two or three times a week, and set a lot of mucus-producing food so their minds won't ever wonder how it would be without all that mucus. The Sumerians knew better. All they ate were walnuts, and they only fucked once a year."

(continued)



## Water in the Service of Man

"Water, that's our life," a Navaho told me once. This book details how the man-water relationship is played—ancient techniques, theory, flow in pipes and channels, waves, pumps, turbines, wells hydrology. A neat package.

—SB [Suggested by Steve Bar]

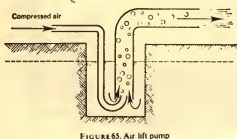


FIGURE 8 Air lift pump

Waves in deep water generally travel in groups or trains, separated by patches of comparatively calm water, rather than in a continuous series. A peculiar feature of the travelling groups is the successive disappearance of the leading waves and the corresponding appearance of fresh waves at the rear of the train. This results in the group advancing with a velocity that is only half the velocity of the individual waves. The newly created 'rear' waves gradually work its way through the group to the front and then disappear. Perhaps there is some human analogy in this birth of a wave, its advancement through the group, and its ultimate death.

## Aermotor Windmills

about everyone at home used aermotor, pitmans, pitman guides, well points, water sand, home brew in the water tanks.

Aermotor Information  
free

from: Broken Arrow, Oklahoma 74012

—jd

AERMOTOR PUMPING CAPACITY									
Diameter Dweller inches	Capacity per hour, gallons		Total Elevation in Feet Size of						
	4 in.	6 in.	8 in.	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.
1/2	105	130	150	175	200	225	250	275	300
3/4	120	150	180	210	240	270	300	330	360
1	130	160	190	220	250	280	310	340	370
1 1/4	140	170	200	230	260	290	320	350	380
1 1/2	150	180	210	240	270	300	330	360	390
1 3/4	160	190	220	250	280	310	340	370	400
2	170	200	230	260	290	320	350	380	410
2 1/4	180	210	240	270	300	330	360	390	420
2 1/2	190	220	250	280	310	340	370	400	430
2 3/4	200	230	260	290	320	350	380	410	440
3	210	240	270	300	330	360	390	420	450
3 1/4	220	250	280	310	340	370	400	430	460
3 1/2	230	260	290	320	350	380	410	440	470
3 3/4	240	270	300	330	360	390	420	450	480
4	250	280	310	340	370	400	430	460	490
4 1/4	260	290	320	350	380	410	440	470	500
4 1/2	270	300	330	360	390	420	450	480	510
4 3/4	280	310	340	370	400	430	460	490	520
5	290	320	350	380	410	440	470	500	530
5 1/4	300	330	360	390	420	450	480	510	540
5 1/2	310	340	370	400	430	460	490	520	550
5 3/4	320	350	380	410	440	470	500	530	560
6	330	360	390	420	450	480	510	540	570

## Dowsing

Finding water is serious business. So is dowsing. This is the only how-to book I've ever seen. If you have a talent for this, how would you know but by trying?

—SB

Dowsing—An Introduction to An Ancient Practice  
Gordon MacLean, Sr.  
1970; 27 pp.

\$1.25 postpaid

from: Gordon MacLean, Sr.  
30 Day Street  
South Portland, Maine 04106

This pamphlet represents the experience of many experienced dowsers which they willingly share with others at the conventions of the American Society of Dowsers, Inc., held at Danville, Vermont the first weekend of October of each year.

These experiences have been collected by Gordon MacLean, Sr., a Chemical Engineer, an American Chemical Society, the American Institute of Chemical Engineers and is a Fellow of the American Association for the Advancement of Science.

As president of the American Society of Dowsers, Inc. for 1968 and 1969 he was in a favorable position to make this collection. As a Trustee of the Society he continues his interest in this fascinating field which he hopes you will share with him.

Address any correspondence to him at

30 Day Street  
South Portland, Maine 04106.

This is not an official publication of the American Society of Dowsers, Inc., since it represents the opinions and practices of individual dowsers which may not necessarily be those of the Society.

72 Water  
Land Use



FIGURE 39. Water-supply pipeline. Practically all of the difference A, in level between A and B represents energy expended by the water in overcoming pipe-flow resistance.

Water in the Service of Man  
H. R. Valentine  
1967; 221 pp.

\$1.45 postpaid

from: Penguin Books  
3300 Clipper Mill Road  
Baltimore, Md. 21211  
or WHOLE EARTH CATALOG



## Dempter Windmills and Pumps

Information from:

Dempter Industries Inc.  
P.O. Box 848  
Beatrice, Nebraska 68310



An outfit that uses an electronic diving device with a pretty good record is Accurate Water Location. You can get a franchise from them if you want to go into business, or you can get the address of their man nearest you. Fee for water search is \$200 plus his travel.

—SB

Accurate Water Location Inc.  
Route 376  
Poughkeepsie, N.Y. 12603



## Heller-Aller

windmills, towers, pumps, and so forth  
—jd

## Information

from: The Heller-Aller Company  
Corner Perry and Oakwood  
Napoleon, Ohio 43545

Oil Once a Year



The company was organized by John Aller and Frederick Baker. Sam Heller, a dry goods merchant, joined the company in 1904. The company's mills still bear the trademarked name "Baker" on their fan blades.

The development of gasoline and electric water pumps shrank the market and the competition after the 1920's, Mr. Heller said. Where there were once almost 20 concerns making windmills, now there are only two others competing with his, the Braden Aero-motor Corporation of Broken Arrow, Oklahoma, and the Dempter Mill Manufacturing Company of Beatrice, Nebraska. Before the decline the Heller-Aller Company was selling 4,000 windmills a year.

Despite the efficiency and speed of new water pumps, windmills still serve a useful function, particularly on large ranches where distances prohibit the continual service and refueling that gasoline and electric pumps need.

All a windmill needs, Mr. Heller said, is wind and about a half-gallon of lubricating oil a year. The mills, which last 20 to 40 years, cost from \$200 to \$400, plus \$200 to \$1,000 for a tower, and require no money for operation.

New York Times

SIZE FT.	MODEL	NO. STROKE	(Inches)	APPROX. SHIPPING WT. LBS.	LIST PRICE
6'	12	5	1/2	280	\$255.00
8'	12A	5-1/2	7-1/2	388	\$350.00
10'	12	5-1/2	7-1/2	510	\$500.00

## Swimming Pools as Reservoirs

Water being a basic necessity for life, especially in the country where it doesn't just run out of faucets, we'd like to pass along an idea for water storage, that we have been using for over a year. A swimming pool—the kind you assemble yourself with aluminum frame and plastic liner—makes a totally adequate storage tank.

When we were planning our water system, we investigated the various ways of storing water, ranging from homemade cement tanks (tricky to build so they don't crack) to expensive redwood tanks (approximately \$600 for 5000 gallons and you have to keep them full or the wood gets screwed up & leaks). Finally, and luckily, we hit upon the idea of a swimming pool. We got ours (15 ft. diameter, 5700 gallons) during a Monkey Ward Spring Catalog Sale for about \$160—a real buy, but quite at regular prices (up to \$200) this beats the redwood tanks by quite a bit. It's easier to install than a cement tank. Sears and Roebuck also carry similar models.

We installed ours on a hillside above our house (after leveling and sloping up a 15 ft. area), and we siphoned the water to our house & garden using good old gravity (the tank is high enough above us so we have adequate pressure). The plastic liner (very good heavy duty) imports no taste to the water, and can be replaced for about \$40. The plastic cover you can buy to go with the pool (about \$12) is worthless, so we bought heavy black plastic, draped it over a one-shaped frame we built of 2x4's (to keep the plastic from hanging down in the water—it's heavy!), and secured it around the circumference with the nylon rope that came with the original cover.

If you're going to use a siphon, cover the pipe (we used a length of copper pipe connected to our regular plastic pipe) up off the bottom of the tank 6-10' and cover the opening with screen to keep out the silt (which settles to the bottom, bugs & frogs. If you install this tank on a hillside, try to find a spot that has a couple of big trees (advantage stands for shade) and let it get built up against an old burned-out redwood, so that if the earth shifts the whole pool won't slide downhill—an unlikely occurrence, but you'll sleep better!

upkeep is minimal. We emptied ours completely after a year to clean the liner, and found that it really wasn't necessary (the plastic looks grungy, but it's really dirty). We "fill" ours about once a month (more often in the summer) and let it get completely empty or the siphon wouldn't work. It costs us less than \$2 per month in electricity to pump water uphill from our spring (if you're smart you'll put your spring above your tank—but we didn't have a choice).

Hope this suggestion will solve someone's water-storage problem as well as it solved ours. Will be glad to answer any questions we can.

Ron & Liz Peck  
Star Route Box 83  
Meyer Flat, CA 95554

## Manual of Individual Water Supply Systems

water supply,  
gets into hand dug wells,  
a little stiff on heavy electric motors.

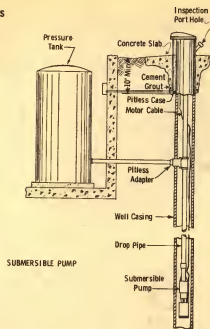
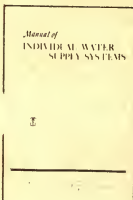
-jd

## Manual of Individual Water Supply Systems

U.S. Dept. of Health Education and Welfare

\$1.60 postpaid

from:  
Superintendent of Documents  
Government Printing Office  
Washington D.C. 20402



### TYPES OF WELLS

Wells may be classified with respect to construction methods as dug, bored, driven, drilled, and jetted.

Drilled wells may be drilled by either the rotary or percussion method.

Each type of well has distinguishing physical characteristics and is best adapted to meet particular water-development requirements.

The following factors should be considered when choosing the type of well to be constructed in a given situation.

1. Characteristics of the subsurface strata to be penetrated and their influence upon the methods of construction.
2. Hydrology of the specific situation and hydraulic properties of the aquifer; seasonal fluctuations of water levels.
3. Degree of sanitary protection desired, particularly as this is affected by well depth.
4. Cost of construction work and materials.

## Prospecting and Operating Small Gold Placers

When I was panning gold one summer up along the Feather River a few years ago, there were still a couple of old left-overs from the Depression living meagerly off of placer gold, but Jesus that's thin hard work. Nobody pushes you around though. And just down the river from my claim a couple of college kids cleared several thousand \$ out of an unlikely sandbar. This book gives you the working rudiments.

-SB

## Prospecting and Operating Small Gold Placers

William F. Boercke  
1933; 145 pp.

\$5.95 postpaid

from:  
John Wiley & Sons, Inc.  
605 Third Ave.  
New York, N.Y. 10016



Rocking creek gravels in California.

The placer miner who is obliged to rely solely on the pan for treating the gravel must realize that it will be only the exceptionally rich gravel that will yield him day's wages, and he must therefore try to find pay-dirt that is far above the average. Just a few colors to the pan, however consistent, will not pay out, because it is not physically possible for him to put through unaided enough gravel by panning alone, though the gravel might pay handsomely by some more ambitious plan of working.

For pamphlet Staking a Mining Claim on Federal Lands send 15¢ to:

U.S. Government Printing Office  
Division of Public Documents,  
Washington, D.C. 20402

## Miners Catalog

Mack Taylor, head of Exploration Laboratories, says this is the only Miners Catalog. We're glad it's a good one.

[Suggested by Mack Taylor]



**MODEL G1717 ENGINEERING COMPASS.** Similar to Model G1719 Geological Compass except that it does not have pendulum clinometer, level bubble or extension rule. This is a fine instrument for most engineering measurements.

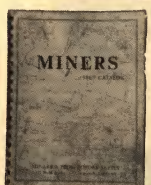
The compass and optical clinometer scales permit rapid reading of horizontal and vertical angles with a precision unusual in a hand-held compass. Weight with case 9 ozs. Complete..... \$72.50

**ATLAS OF LANDFORMS**  
by James L. Scovel et al. A terrain study atlas compiled essentially from the series of 100 topographic maps illustrating typical landforms published by U. S. Geological Survey. Text material, aerial photographs and diagrams. Effective guide to land form study. 14x12x1/2, 368 pp., 1965, Flexible binding. \$10.95



Miners Catalog free  
42 pp.

from:  
Miners and Prospectors Supply  
177 Main Street  
Newcastle, California 95068



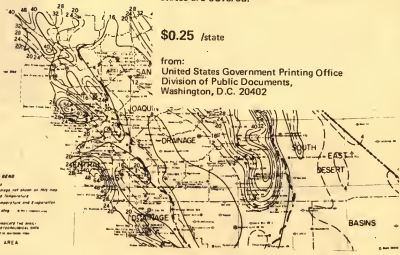
## Climates of the States

Specific climatological data on each state: rainfall temperature, freeze occurrences, winds, etc. Not all the states are covered.

-SB

\$0.25 list

from:  
United States Government Printing Office  
Division of Public Documents,  
Washington, D.C. 20402



Normal Annual Total Precipitation (Inches) - California



## Water and Land

Another thing to think about. Any community must have water. The U. S. Geologic Survey publishes ground water surveys of many parts of the country, these include information on the availability of water, how deep it is and how much water can be expected.

Another service of the benevolent Uncle is through the extension service of the various states. Usually with the Agriculture Dept. I know in N. J. they will send a representative to talk to you or supply information about soil analysis, plants, bugs, anything in that. Usually straight, but into the land and very helpful, good people.

Steve Schlossman

## Underwater Prospecting Techniques

A vote for goldwater is a vote for fun.

-SB

### Underwater Prospecting Techniques

Vaughn M. Greene  
1960, 95 pp.

\$2.00 postpaid

from:  
Vaughn M. Greene  
548 Elm Avenue  
San Bruno, CA 94066



All they ate were walnuts, and they only fucked once a year. Once a year, that was all, but it was enough, you see.

Because what they had were these fantastic folk rituals where everybody over ninety got together in the temple at the summer solstice and balled, seventy-two hours non-stop. It was far out. Of course the younger people did it a little more often than that. But even they knew, at incredibly young ages, like nine and ten and twelve, that there were laws in life, and that if you learned them and obeyed them, learned how to organize your impulses properly within the limits set by Sumerian law and folk custom, you became capable of genuine spiritual enlightenment.

Yes sir. The Sumerian line of nut-eaters remained unbroken right on up till almost modern times. That's a little known fact, but it's true. There's a good book about Sumerian nut culture by a guy named Apok you ought to read. Dr. F. Wong Apok. Fantastic book. It really changed my life.





#### CEDAR AXE

"Flint Edge" Cedar Axe. Double Bit. Balloon Pattern. Head Weight 2½ lbs. 28" Straight

Handle. No. 160780 .....\$7.35



Price  
\$12.05



\$4.25



\$4.95



#### Ben Meadows

a beautiful catalog of real touch them tools.  
ben meadows sells them, great quality, goodie gumdrops.  
-jd

[suggested by Sally Mathay]

Ben Meadows Forestry and Engineering Supplies Catalog 536 pp.

\$3.00 postpaid (\$3 credit with first order over \$25)

from:  
Ben Meadows Company  
P.O. Box 8277  
Atlanta, Georgia 30306



#### ALTIMETER

Fine quality movement. 12,000 foot level. Size 1½" diameter. Chrome case. Each in attractive leatherette case. Made in Germany.  
No. 102108 .....\$32.50



HAT WITH LEATHERETTE BAND		
Cat. No.	Price	Color
131200	\$4.30	Aluminum
131201		Red
131204		Blue
131206		Green
131205		Brown
131210		Gold



\$27.50

EXCLUSIVE "LOCK-IN-OUT" HOLDING DOG can be locked in "out" position, so hold.

EXCLUSIVE EXTRA LONG CABLE - Big, full capacity, shock loads, even water, enables you to do more jobs with this useful device. 20 ft. max. length of light weight, flexible strength aluminum.

BENDING PANEL STRAINERS STEEL SPRINGS. The Beake Buckner Puller has two sturdy tension plates, with long life, stainless steel springs. All pin joints are hardened steel.

STEEL PARTS - Including steel frame are cadmium plated to give more years of useful life. Hardened galvanized aircraft cable on all models.

LARGER MODELS make the Beake Buckner Puller easier and faster to use. Made of forged steel, heat treated for strength and corrosion plated for corrosion resistance.

EXCLUSIVE QUICK-DETACH PULLEY is easily and quickly removed.

EXCLUSIVE 3-MODEL STANDARD OR JOOPF MODELS. The Beake Buckner Puller functions in both on standard equipment on the JOOPF model, permitting rapid selection of double or single line operation.

#### ELLIPSE CURVE IN PERSPECTIVE

A combination of useful ellipse curves and radii points for pattern and illustrative layout work.

No. 040506 - Ellipse Curve .....\$3.90



RELIABLE SET NO. 020084  
\$18.25

#### Handyman Jack

Basically the Handyman Jack is a super heavy duty bumper jack but it bears no resemblance to the inadequate things that Detroit supplies with their inadequate automobiles. It weighs 28 pounds, has a capacity of 3 tons, is four feet tall, and has a lift of three feet. The jack is guaranteed for 18 months, and complete repair parts are available should they ever be required.

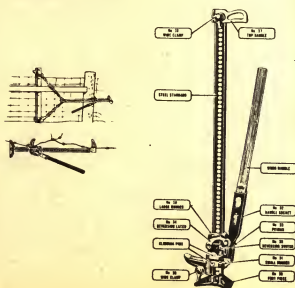
I've used mine for lifting my truck, stretching shrunken plastic water pipe, and a number of odd lifting and spreading jobs, and wouldn't part with it for anything.

WARNING: Beware of handle, or EAT TEETH.

[Suggested and reviewed by Douglas Canning]

\$25.00 (30 lbs.)

Herron Manufacturing Company  
46 West Spring Street  
Bloomfield, Indiana 47424



#### Tractor Supply Company

OK, so you've got this new community in Niobrara County, Wyoming, half way between Dull Center and Bright. You've got 20 people, 5 assorted dogs, a hen (but no rooster), and 12 cats, several of which are pregnant. You've also got: 1) glacier tent, 1 yurt, a Red VW Microbus camper with a noisy rear end, a 15 speed racing bike, and a 1947 John Deere "A" tractor.

There being no roads within 40 km., the Poppin' Johnny is the only transportation in or out. (I told you to get a horse.) Except "11", just broke a rear axle (I told you not to try those 20 ft. jumps) and it's a long, long, way to your Friendly Local John Deere Dealer. Who probably doesn't have the parts in stock anyway. And 1) won't come get your tractor; 2) doesn't want to sell you a repair manual.

There is only one general mail order house that I know of that deals in tractor parts: TRACTOR SUPPLY COMPANY.

[Reviewed by Curtis Cole]

Catalog  
free

from:  
Tractor Supply Company  
4747 North Ravenswood  
Chicago, Illinois 60640



The beauty of this tome, and its abridged edition, is that it does not stop after postulating optimum conditions like a "long enough lever and a firm place to stand." After suggesting ways to clear land, remove tree stumps, or lay out an access road using rented machinery like dozers and dump trucks, it goes on to explain many other ways to get it done when the "proper" equipment is not available. Most conceivable snafus are dealt with. Not just how to use a dozer so it doesn't turn over, and rig a winch so it doesn't break, but how to get your dozer back on its tracks without calling the A&A, and how to unsnarl your winch. All is explained in text and again in eminently understandable drawings.

[illegible]

A diagram illustrating a cable block system for clearing. A tractor is connected to a winch, which is in turn connected to a cable. The cable passes through a block pulley (snatch block) and is anchored to a tree. The cable is also connected to a double choker, which is used to pull a log. Labels include: CLEARING, ANCHOR, WINCH, FOUR TIMES WINCH PULL ON TREE, DOUBLE CHOKER, SLING BLOCK, BLOCK PULLEY (SNATCH BLOCK), WINCH, WINCH, and TRACTOR ANCHOR LINE.

**TRANSIT**

- 1. Telescope
- 2. Telescope Bubble Assy
- 3. Vertical Clamp
- 4. Vertical Clamp Screw
- 5. Focusing Screw
- 6. Eyepiece Cap
- 7. Vertical Tangent Screw
- 8. Telescope Support
- 9. Horizontal Clamp Screw
- 10. Horizontal Circle
- 11. Venter Plate
- 12. Horizontal Tangent Screw
- 13. Tripod Head and Base Plate
- 14. Tripod Leg
- 15. Plumb Bob
- 16. Tripod Wing Nut
- 17. Center Screw
- 18. Leveling Screw
- 19. Leveling Head
- 20. Support Level Tube
- 21. Horizontal Circle Scale
- 22. Telescope Transum
- 23. Vertical Arc Pointer
- 24. Vertical Arc
- 25. Vertical Arc Scale

## Transits & Levels

01 uses for a transit and level are given and a select few are simplified. It illustrates the method of squaring foundations and establishing straight lines for numerous uses. Straight crop rows are laid out with a transit which doesn't sound like a necessity but it can be helpful to the mule pulling the plow.

## Rock and Dirt

**Rock and Dirt**  
Crossville, Tennessee 38555

	3 Mo.	6 Mo.	12 Mo.
Air Mail	\$6.00	\$12.00	\$24.00
First Class Mail	3.50	7.00	14.00
Third " "		2.00	4.00

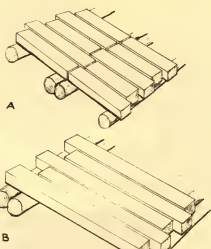
or **WHOLE EARTH CATALOG**

Fig. 3-10. Railroad ties for truck road

*Great for rough topographical mapping necessary for planning and laying out water systems, roads, you name it.*

Basically a high quality sighting compass with 10 graduations, it has an integral clinometer for vertical angles 10 to 90° with a vernier reading to 10 minutes. Very rugged

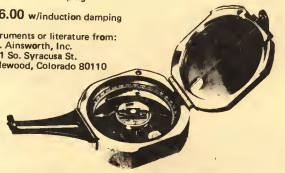
Hand-held, it is hard to make use of its full capabilities, so there is a ball and socket head available for use with a tripod or Jacobs staff. The Brunton is available graduated in either quadrants or degrees and with or without induction damper.

*[Reviewed by Fred Richardson]*

**\$57.00** w/o damping

**\$66.00** w/induction damping

Instruments or literature from:  
Wm. Ainsworth, Inc.  
5151 So. Syracuse St.  
Englewood, Colorado 80110



### D-7 DOZER

3T 21216



**"M" Series** NOW \$1,750  
Late Model, very clean, low mileage, dual tires 900 x 20. Just removed from Gov't. Storage Depot. Cab - chassis.

## TWIN COACH BUSES

*Only 6 Left*



Only 6 Left:

- 41-45 Passenger • 2 Side Doors
- Emergency • Fageal Engines • Full
- Power Trans. • 10 Hole Budd 20" Wheel

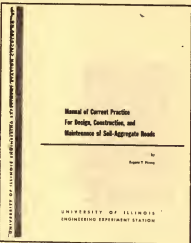
These Buses are Nice Units which were operated even  
a strike which resulted in the termination of the franc

7 Units with some cracked  
windows - As Is

**\$500**

*Not how to build a road, but how to design it. For minimum maintenance and maximum service. Useful from driveways up. From dirt surface to pavement. Some bad stuff like calcium chloride too.*

*[Reviewed by Fred Richardson]*



from:  
Engineering Publications  
112 Engineering Hall  
University of Illinois  
Urbana, Illinois 61801

**\$3.00** postpaid

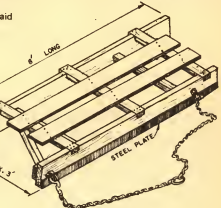


Fig. 5.4 Road Drag Constructed of Sawed Lumber



HUSH, LITTLE BABY

Estalla resisted the irritation of the Graek's rap for perhaps a hundred milas. But gradually she moved into a thinner sleep dimension which his voice pierced like clews. When she absolutely couldn't stand any more she leaned up on her elbow and yelling asked the Greek please to hush a while.

"Hush, you say," said the Greek, also yalling so Estelle could hear him above the VW's whirling engines. "Hush. Now there is one of the more peculiar words in all the English language. Hush. Notice how simple that word is, yet how loaded with implication, and strange music. Hushhhhhh. Hear that whisper? It's like the sound of a feather falling from a cloud, or the sudden equivalent to what's swaying in a Van Gogh painting. Hushhhhhhh, little baby. There's only one vowel in hush, but notice how the whole word hangs on it, sort of pivots on the U, how it seems to clutch at either side of the U and just hang there in perfect balance. Notice, now, how the word is at once both a verb and a noun. Hush that noise, but also a noun. A hush settled over the audience as they listened intently onto the stage. Hush. Hush. Now... A marvelous word, hush."

When the Graek had finished, Divine Right broke into applause. He tried to say "Bravoi!" but he was so stoned, his tongue was so uncontrollable, the word came out as a kind of growl, like some moron's, or an ape's. The slurpy nonsense of D.R.'s "Bravoi" caused him and the Greek both to break into hysterical laughter.

"Stop the car," said Estelle. She had scooted forward to sit next to D.R., just behind the Greek and Friede.

"What?" D.R. tried to say, but it was such a goofy sound he

"Excuse me, honey," said Estelle to Frieda as she elbowed past D.R. and crowded into the little space between the two front seats. When she was situated she told the Greek once more to stop the car.

"Stop," said the Greek. "Now there is truly one of the interesting words in our language. When you analyze the word stop . . ."

Estelle grabbed the steering wheel and jerked Urge violently to the right. Gasping in mid-sentence, the Greek yelled "Are you crazy?" and fought to keep the bus from going off the road. Estelle said nothing. She waited till the Greek had the vehicle under control, then grabbed the wheel and yanked Urge toward the edge again. When she did it two more times the Greek at last got the idea and began slowing down. A mile or two later they left the freeway and pulled up at a roadside rest area.

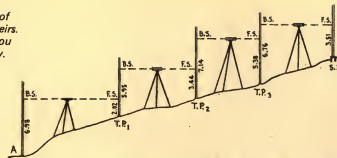
Roads **75**  
Land Use



## Surveying

surveying is the human way of pissing on all the corners of your property, so you know what's yours and what is theirs. It is also a way of leveling, finding corners, mapping, if you are going to use land, chances are you'll run into a survey. This book seems to cover the discipline and use of the surveyor's tools.

—jd



Point	B.S.	F.S.	Remarks
A	6.98		Bolt in S.W. Abutment High St Bridge
T.P.1	5.95	2.02	
T.P.2	7.14	3.44	
T.P.3	6.78	3.38	
B	3.51		N.E. corner slow bend in sidewalk, at #3 High St.
	26.85	14.55	
	14.35		
Diff.	12.48	B above A	

FIG. 51. DIFFERENTIAL LEVELING.

Surveying  
Charles B. Breed  
1942, 1957; 495pp.

\$7.95 postpaid

John Wiley and Sons  
605 Third Avenue  
New York, New York 10016

or WHOLE EARTH CATALOG



1st. Set instrument on ground near point, with legs spread, to give convenient height. Without reference to point, move legs so that plates are nearly level. Tripod leg screws should be firm but not binding.

2nd. Pick up instrument bodily without disturbing relative position of legs and head.

3rd. Place down again with plumb-bob within 1' of point and bring bob to within 1' to 1 1/2' of point by shifting legs slightly.

4th. Swinging one or more legs in arc of circle with approximately level head without changing materially the position of bob.

5th. Press each leg firmly into ground about same amount, watching position of bob so that it will finally return to within 1' to 1 1/2' of the tack. Plates should still be nearly level.

6th. Bring bob exactly over tack by loosening two adjacent leveling screws and shifting head. Then tighten leveling screws and proceed to level the plates.

## Blasting

Explosives are a cheap, highly portable, concentrated source of energy, an industrial and agricultural tool and as such useable and useful to the amateur who has need of such tools. Dangerous? Yes, but only a small hazard with reasonable care—consider as no more, NOR LESS, dangerous than a gun which has no safety and is never unloaded. Treat accordingly—particularly with regard to whom you allow to handle them! Can YOU use explosives? . . . Yes—with care. Will YOU be ALLOWED to? . . . Probably, but there ARE regulations and they vary too widely for generations.

What would you want them for? The possible answers to that question would surprise most people—the uses of explosives range from the moulding of NASA hardware to the manufacture of diamonds! For the amateur though the most likely uses will lie in the making of access roads, foundations, land clearance and drainage. For instance, \$25 worth of explosive will break up 150-400 tons of rock, or lift out and break up a dozen large stumps, or blow a ditch four feet deep, twelve feet wide at the top, tapering to four at the bottom and one hundred feet long. It is often, in outlying areas, cheaper to use explosives to clear a drainage or creek diversion project than to pay the cost of getting a backhoe to the site. Also explosives can be used anywhere a man can go, which is often to places machines can't. Even for a simple job like digging a trench for a culvert, a few dollars worth of dynamite used merely to loosen hard-packed soil can easily make the difference between man days of pick work and man hours of shovel work.

The next question is: Where do you go for more information? And the answer to that is, your phone book, under "Explosives" in the yellow pages. Try first the nearest big company; Du Pont has the most literature, Hercules seems the most helpful. Then try your nearest dealer, your local police, fire chief and Highway Patrol, in that order. Know before you pick up the phone what you want to do and simply ask for advice and help with the regulations to enable you to do it. It is, however, normal to find that about half the letter have little ideas themselves, so persist that about half your local regulations for yourself. If necessary writing to your state capital. It goes without saying that the most useful information anyone can give you is the address of a neighbor who is experienced in handling dynamite. If you are unlucky and have to work entirely from the book, don't worry too much there isn't any reason why you shouldn't do so safely, with no more than common sense AND RIGID ADHERENCE TO THE BOOK'S INSTRUCTIONS! Without knowledge of the reasons behind the regulations and the book's "Do's and Don'ts", you must not deviate in the slightest. In particular your local regulations for transport, storage and use will be framed to reflect local conditions and hazards—every little detail MUST be scrupulously observed.

Practical literature is restricted to handouts from manufacturers and, for those who have \$6 to invest, Blaster's Handbook from E. I. du Pont de Nemours, Wilmington, Delaware or Canadian Industries Limited, Montreal, Quebec. Imperial Chemical Industries, Limited, Nobel Division, Stevenston, Ayrshire, Scotland, also provides a handbook entitled Blasting Practice. Whilst the handbook admittedly contains everything, they necessarily therefore only devote a small fraction of their space to the needs of the amateur; moreover, being aimed at the professional, they are neither well laid out nor well written for anyone else.

There is a pamphlet which, despite its small size and vaguely apologetic foreword, is a class above anything else in its field and a model of terse lucidity—"Efficient Blasting through the proper care and use of Safety Fuse" from the Ensign-Bickford Company, Simsbury, Connecticut.

Two final points: If you want to blast near rail, power, phone, or pipe lines, contact the owner; and if you have charged up your first blast and want to know how far to retire and discover that the books become suddenly vague at that point—well, half a mile is a nice round figure . . .

[Suggested and reviewed by Keith Britton, Advanced Blasting Company]

## Blaster's Handbook

CIL

CIL Blaster's Handbook

\$6.00 postpaid

from WHOLE EARTH CATALOG

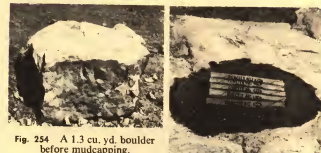


Fig. 254. A 13 cu. yd. boulder before muckpiling.

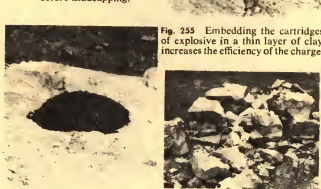


Fig. 255 Embedding the cartridges of explosive in a thin layer of clay increases the efficiency of the charge.

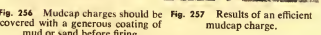


Fig. 256 Muckcap charges should be covered with a generous coating of mud or sand before firing.

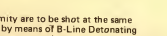


Fig. 257 Results of an efficient muckcap charge.

If several charges in close proximity are to be shot at the same time, firing must be carried out by means of B-Line Detonating Fuse or E.B. caps because all charges must detonate simultaneously; otherwise the first charge to fire might dislodge those on adjacent boulders. Where a single charge is to be fired, a fuse and cap may be used.

Rock varies greatly in hardness, density, cleavage planes, etc., thus charges from two to six 1 1/2" x 48" cartridges per cubic yard may be required. If the rock is very large or its width greatly exceeds its height, the charge should be divided into two or more parts and placed so that they will have the maximum effect. In the case B-Line Detonating Fuse or E.B. caps should be used for simultaneous firing.



Fig. 289 An opening notch is first blasted in the 14' x 14' base of a 127-foot brick stack.

Old stacks, of both round and square shape, whether constructed of brick or concrete, can be rapidly and economically felled by blasting where there is sufficient room. Further, they can be made to fall in the desired direction, or "on line".

The "falling notch" principle a lumberjack uses when he cuts a notch at the base of a tree, is the method employed. This involves blasting an opening cut out of that side of the stack in the direction of fall, and subsequently widening this cut by blasting successive holes, or rows of holes, on each side of it. It is essential to shoot the corresponding holes, or rows of holes, one on each side of the opening cut, simultaneously. In this way the final blast undermines each side of the stack at exactly the same instant and thus it topples over in the desired direction. Sometimes it is of assistance to drill a row of closely spaced holes on that side of the stack opposite the direction of fall. These holes are not blasted but provide a line of weakness so that the masonry will part readily and allow the stack to break away from its foundation when the undermining has been completed.



Fig. 290 Final blast brings down stack shown in Fig. 289 "on line".

## Knowing Your Trees

The encyclopedia of trees in America, with descriptions and illustrations. There are photos of leaves, seed pods, bark, and the natural range of each type tree. Lovingly presented, in print for over 30 years.

—Lloyd Kahn [Suggested by Rodger Reid]

## Knowing Your Trees

G. H. Collingwood & Warren D. Brush  
Rev. & Ed. by Devereux Butcher  
1937, 1964, 340 pp.

\$7.50 postpaid

from:  
The American Forestry Association  
919 Seventeenth Street, N. W.  
Washington, D. C. 20006

or WHOLE EARTH CATALOG



## Chainsaws

mac and homelite are the ford and chevy of chainsaws. dealerships abound in timbered country, parts are easily found, and the saws are fairly simple, hard working, tools. I've used both, and, being a ford man, prefer the McCulloch, for no particular reason other than that they seem to run a little better, work a little harder. both companies make a full range of sizes, from the teeny six pound, compression release, backyard loggers saws, right on up to the big mothers, with thirty inch rollerbar, barclaw dogs, and multiple harnes.

—jd

## Information

free

from:  
McCulloch Corporation  
6101 West Century Blvd  
Los Angeles, California 90045

## Information

free

from:  
Hemite  
A Textron Division  
Port Chester, New York 10573

## Alaskan Mill

This is a roller attachment for a chain saw that enables you to make boards from 2000s. You need a minimum of 6 horsepower and a 16"-24" bar to power the one-man mills, and we're told that 12-15 h.p. is needed for cutting any quantity of lumber.

There are two one-man attachments, and three two-man models.

—SB

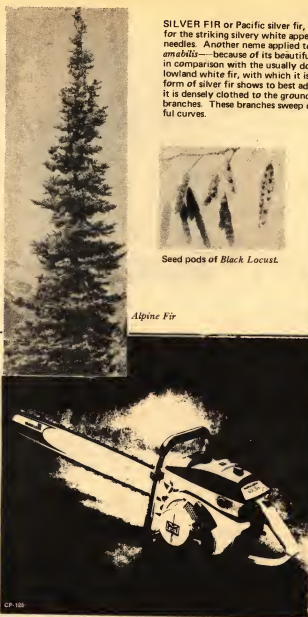
[Suggested by Elias Velonis]

Granberg Alaskan Chainsaw attachment (one-man)

No. G-758 \$71.50 FOB Richmond

Two man models: \$287.00-\$350.00

from:  
Granberg Industries  
281 N. Main  
Richmond, CA 94801



Alpine Fir

Seed pods of Black Locust



Fan-shaped leaf of Ginkgo tree is found in no other plant.

The redwood and its close Sierra relative, the giant sequoia, *Sequoia gigantea*, are the largest, and almost the oldest, life forms in North America, if not in the world.

Accurate ring counts cannot be secured without destroying the tree, but it is assumed that redwoods 300 feet high and twenty feet or more in diameter may approach an age of 2,000 years. Most of the redwoods cut in commercial operations are from 400 to 600 years old. These are from three to ten feet in diameter, and 200 to 275 feet tall.

## Tree Finder

For fast unromantic identification of trees, these shirt pocket books are excellent.

[Suggested by Catherine Yronwode] —SB

Master Tree Finder (for east of Rockies)  
\$0.50 postpaid

California Tree Finder  
\$1.00 postpaid

Winter Tree Finder (east of Rockies)  
\$0.50 postpaid

all from:  
Nature Study Guild  
Box 972  
Berkeley, CA 94701

## Zip-Penn

Low-cost chains and parts for chain saws.

They also have plastic wedges—you don't wreck the chain if you hit the wedge.

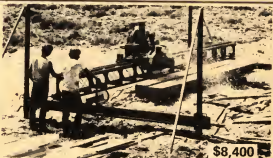
[Suggested by Tom Duckworth]

## Catalog

free

from:  
Zip-Penn, Inc.  
Eastern Division  
P. O. Box 179  
Erie, PA 16512

Southern Division  
P. O. Box 1791  
Tallahassee, Fla 32300  
Western Division  
P. O. Box 876  
Bellingham, Wash. 98225



\$8,400

## Mighty Mite

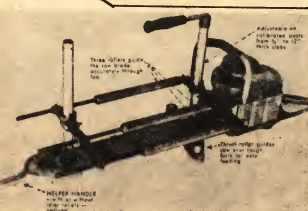
transportable sawmills, expensive, industrial, but a possibility, if you have more money or trees than you care to have.

—jd

## Information

free

from:  
Mighty Mite  
International Enterprises of America, Inc.  
P. O. Box 20066  
Portland, Oregon 97220



## Mobile Dimension Saw

Two issues ago you carried a good report on the "Mighty Mite" saw from Portland, Oregon. It's a good saw, but big and costly compared to its main competitor, the "Mobil Dimension Saw".

The reason for this is that Jim May who first developed the saw, has several patented (and I must say very ingenious) features in his "Mobil Dimension Saw" that for most of your readers are very advantageous. Namely these features result in considerable reduction in overall weight and add considerably to its flexibility. And it does this without any sacrifice in performance potential. There is also a very significant savings in cost.

My dad and I looked into both saws before we bought our large model "Mobil Dimension Saw". We have been very pleased with it. Jim May's son-in-law, Ron Harman, who runs the company now, produces excellent workmanship and comes through with fast and dependable parts and service.

I suspect that for most commune type of situations, the smaller models would more than suffice, and pay for themselves with some outside jobs. Here in the Northwest, logs that are left lying in the forest by loggers for various reasons are often very salvageable with these saws.

[Suggested and reviewed by Fritz Mishner]

Mobile Mfg. Co.  
6810 N.E. Cornfoot Dr.  
Portland, Oregon 97218



\$2,500

## ONWARD CHRISTIAN SOLDIERS

Oh joyous joy of wondrous joys, look at the lovely world. The sky, the clouds, and feel the wind whipping little dusts against your skin.

A minute ago I bent over to pick up a rock the size of a nickel, but when I touched it it scorched away on the tiniest little footprints I ever saw.

A beautiful intrusion quadruples the illusion.

Confusion.

Confusion.

Ha!

What I'm trying to do is get from here to over there but it's a long, hard way of going, let me tell you.

Oh joyous joy of wondrous joys, look at the lovely world.

The world has a blue ceiling and no walls anywhere to be seen.

And a sandy-colored carpet with a parking lot painted on it.

The bright and is painful to my eyes, and wondrous to behold.

I've got some sunglasses, but who knows where they are?

Estelle would know, but where's Estelle?

Playing in the dunes.

If I want to call to her she couldn't hear me, because of the constant wind, blowing through my mouth to take my breath away.

Trudge, trudge, trudge. Onward Christian soldiers, over the vast land. Through heat, sun and wind, in spits of loneliness, fear, isolation, and a twisted tongue he goes on, on, forever on toward the Concrete Picnic Tables, ancient relics of a culture long forgotten, buried by the desert sand.

"I'm coming; you guys. Wait for me, I'm coming!"



## Finding and Buying Land

The trick is, helping the seller find you. The best way to do this is advertise. Find out what the land owners read, and advertise there. It may be the bulletin board at the general store or the six ranchers' journals of the northwestern states (find at libraries in the area). Say in your ad what kind of land you're looking for and what you're willing to pay, e.g. "WANTED TO BUY, mountain land, south slope, timber, year-round flowing water, prefer no improvements and minimum roads; 200-600 acres, in northern Oregon or Washington state; will pay \$60/acre if suitable, good cash terms." Mortimer Head, 1111 A St., Portland, Ore., 16161, (007) 242-4242."

This procedure largely bypasses the real estate agents, and good guidance. Most are a foul breed, though one in twenty is all right and can help you.

To find out what land you want takes some research. Shop around locally and get a feel for the terminology and considerations of land buying (clear title, developed springs, grass for 200 head, adjoining National Forest, county road, mineral rights, water rights, NE 1/4 of section 28 R 17 T26, taxes last year, six-months option, etc.) Visit friends who have land and see what they like and don't like about it. Tell everybody you talk to that you're looking for land and let them rattle on.

Finding an area to suit you is partly a matter of maps and partly visits to see how the climate and vibrations are. Write for United Farm and Strout Catalogs for rough (high) land values in various areas.

The most important source of information on a piece of land besides visiting it is the USGS (US Geological Survey) topographic map of the area. Order the index map for the state(s) you're interested in, have someone show you how to use Range and Township to locate yourself, and buy the appropriate maps. At 50¢ apiece they are an outstanding bargain.

Once you get to seriously considering a piece of land go to the County Assessor's office to find out what the County knows about it. They will have records showing what was paid the last time the property was bought and when the sale took place. They also will have maps showing who your neighbors are and where they can be reached. If you're trying to find the owner of a piece of land, that's the way. (Incidentally, wandering around in pretty country falling in love with various sites is no way to get land. It always either belongs to the Government, who won't sell, or some guy who won't sell.)

Bear in mind there is a rural land boom going on. Land that was \$50/acre last year is \$80-70/acre this year. Stay away from developers and their prices. They buy a big hunk cheap and sell little hunks dear. They and the neighbors they'll get you are a pain in the ass.

When you buy land in a place and start living there, you become a citizen of the county and state. Don't be surprised if the other citizens are interested in you. Wouldn't you be?

—SB

## U.S.G.S. Maps

Get state indexes and maps from:

Map Information Service  
U.S. Geological Survey  
Department of the Interior  
Washington, D.C. 20240

Federal Building  
Denver, Colorado 80225

## Caretaking

Tips on familiarizing yourself with an area—we did this when we moved into Lake County. Read Yellow Pages, cover to cover. The phone book also has other good parts too. Also, want ads and local paper provide much information of interest to the newcomer.

We bucked into a fantastic scene—we are CARETAKERS on a 5 acre farm on Clear Lake. We get free house, utilities and a salary of \$125 per month and also all the fruit and nuts we can eat from the orchard. Fish from the lake, our own garden etc. I report this because I am amazed at the number of CARETAKER POSITIONS open in this area. Check the Santa Rosa PRESS DEMOCRAT—there are usually several caretaker ads at any given time. Our particular "feudal landlord" is a dream—he is only here once or twice a month for a couple of days. Rest of the time place is ours. He is particularly kind to longhairs. Some are not, of course, and generally owners prefer retired couples. But give them a good rap about "youth having more energy and creativity" and they might hire you. Worth a try. We got a garden of Eden—you might too! We don't want to stay here indefinitely, but it makes a great "half-way-house" between city and community.

Larry Kelley  
Kelseyville, CA

## United Farm and Strout

These catalogs will feed your land mania.

—S.B.

## United Farm Agency

## Strout Realty



## Free

from:  
United Farm Agency  
612 West 47th St.  
Kansas City, Missouri 64112  
and the other local offices

## Free

from:  
Strout Realty  
521 E. Green Street  
Pasadena, California 91101  
and other local offices

## Aerial Photography

You can get aerial photographs of any place in the U.S. To find which agency has the pictures get the Status of Aerial Photography map from USGS. It also gives addresses of all the sources.

—SB

(Suggested by Mack Taylor)

## Status of Aerial Photography

## Free

from:  
U.S. Geological Survey  
Denver, Colorado 80225  
Washington, D.C. 20242



THIS VALLEY FARM is just one of the many high-yielding farms that are found in the rich and diversified agricultural "horm of plenty" in Washington.

ON KICKAPOO RIVER



## ALPINE MOUNTAIN CABIN

No.198—10 acres, \$20,000. Rustic mountain cabin located in alpine valley setting of pines and aspen.

Spectacular scenery... combination of exotic rock formations, tall whispering pines, white-larked quaking aspen. 10 acres with 60-ft. frontage on rushing mountain TROUT STREAM. Good spring for domestic water supply. Direct private access to national forest. 2 miles of fishing streams and West Elk Wilderness area. 19 miles to college town. Can be yours for \$20,000. LOW down payment. UNITED, Enclosed, Wyo. Durham, Colo.

## HIGH COUNTRY JEWEL

No.470—5 acres, \$4,000. Surrounded



on 3 sides by national forest land and within 5 miles of winter ski area. A beautiful acres crossed by year-round rushing creek. Covered with aspen, blue and silver spruce trees. Many choices creek-side building sites for your cabin or home. Just below timberline, on Good Forest Service road, 11 miles to town, 66 miles DENVER. In heart of excellent deer and elk hunting, very near several trout and fly-fishing lakes for top trout fishing. Rare find at only \$4,000. LOW down payment. UNITED, Conifer, Colo.

## Property

About the item in your Spring '89 issue about acquiring tax delinquent property: It will work, I believe, as set forth, but the title could end up being a "shaky" one, and there is always the chance you will just end up paying someone else's taxes and improving his property gratis.

Better deal and more straightforward, is to locate several tax delinquent properties, contact the owner or heirs and offer to buy at a low figure.

Also, in California, tax delinquent property is deeded to the state after a few years (5, I believe) and then sold off yearly at a tax sale auction.

Anyone acquiring property in the above fashions (and intending to keep it) should learn something about "searching the title." Otherwise you might, for example, and up with land with a huge public utility easement over it, or subject to a sewer assessment more expensive than the value of the property.

Title search fees by title insurance firms are often reasonable. These companies will sometimes "search the title" and issue a non-guaranteed "preliminary report" at low cost, anticipating that they will later insure the title. Title companies are also sometimes a source of free plat maps and other information.

Some factors to be considered when doing the land thing: government assessments (taxes & improvement districts) easements, rights of way, zoning, liens, "chain of title" and covenants, conditions and restrictions.

Researching can be done at various offices at the county court house or hall of records. Friendly real estate brokers can also be a big help.

A lot can be learned by phone.

Alex Gough  
Atascadero, CA

## Pleasant Land

We haven't seen it, but there's a Research Report On Where It Is Still Pleasant to Live in the USA.

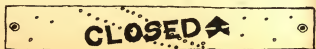
## \$1 postpaid

from:  
Garden Way Research Associates  
Charlotte, Vermont 05445

## Ruined Dinner

Wrote to the Office of Land Management in Alaska about home-steading. Prompt reply came, all homestead land indefinitely withdrawn—ruined my dinner. Very nice Xerox form letter though.

Skip Whelan  
San Diego, CA



## Alaska

### For Facts About Alaska Lands write to:

Alaska Dept. of Natural Resources  
Division of Lands  
323 E. Fourth Ave.  
Anchorage, Alaska 99501

Anybody living all through in Alaska (or elsewhere) can use the invaluable publications from University of Alaska Extension. Well-handled subjects like "Canning Moose & Caribou," "Sourdough," "Fruit Trees in Your Yard," "Greenhouses in Alaska," "Fur Farming," "General Pet Care," "Game is Good Food," "Wild Berry Recipes."

Write to:

Cooperative Extension Service  
University of Alaska  
College, Alaska 99701

## Alaska State Land

I don't know so much about Fed. land here in Alaska, but the state has a good piece more anyone who wants to take the trouble of coming up here and doing the footwork can stake out 5 acres along interior rivers and isolated coastal areas around Kodiak, the Alaska Peninsula, Ketchikan, and "South-eastern." You must be 19 or over, and the land must be surveyed and bought. Costs are \$2000 for the survey and \$1000 for the purchase. I sure hope that anyone who comes up here please don't pollute the place, it's bad enough already.

Daniel G. Leen  
Fairbanks, Alaska

## If You Could Live Here a Year

One can buy land privately from individuals who may or may not be speculators. One can buy and lease land from the State, or one goes up to Palmer in a couple of weeks and buy on five acres of wilderness. The minimum the state wants for this five acre is \$675.00. One hears about these land auctions through a publication called Alaska Land Lines, which is published by the State Department of Lands, and is only to Alaska addresses. Some of their land goes by lease. You can have it five years and then another five, and then if you want to own it you have to hire a surveyor. This is expensive.

Also, there are mineral lands to be had from the U.S., but again you have to have proof of "color," that there are minerals, before they will let you. You never own them, you have to go to an agency and do \$100.00 worth of work for your claims. I think that is right. It has been a long time since I took the course at University College.

Alaska is 500 miles from north to south, and 1500 from east to west. There are parts of it that have not been surveyed, or even explored. Alaska is not for an "effete snob." If you can't face reality, you couldn't survive to live here. Because the realities are harsh. We have bears, and each year the magistrates go into the bear caves looking for buttons, to declare so-and-so dead. We have had 40 sightings of bears in an around Anchorage this year for I am scared of bears. We have horrible weather in the winter. Sometimes, the winters are sometimes cold, and long—always long, and sometimes cold. I remember one winter when it stayed less than 30 below for 3 weeks straight. I made the mistake of turning the car handle with a bare hand. Now each winter the palm of my hand hurts where it was frost-bitten. We lose people to the elements. There was a guy—a GI—here three weeks at Fort Richardson a couple of years ago. He went for a little hike and got lost. He died less than 100 yards from the entrance to the Fort. They called it exposure, but I know a guy that got on rescue missions. He says all the people he has rescued are out of their heads from fright by the time he finds them—that is, the ones who are still alive.

I have been down to the Land Office a couple of times and I see young long-haired people looking over the maps of what is "open" or lease or purchase from the State, and I am glad to see it. In spite of the putdown of young people that is going on in the world, and some places there, too—I hope they can live here. It has always been a saying in Alaska that you could live here you could stay and would stay. It is possible to live off the land yet, but takes planning and the knowhow.

Peacefully yours,  
R. Duffy  
Anchorage Alaska

## Jobs in Alaska booklet

It's your business to so's not 2 offend the locals who forget that they too are some strangers here—but having gone thru the job hunting scene here myself in summers 65, 66 & 70. I can tell this would have been a handy 2 welcome tool. (Do you have any idea how hard it is for someone at a college education to find any outdoor job? Of course you do...)

I would also suggest that the jobsbe have many Form 57's (standard U.S. Govt. employment info. form which one may pick up at any post office) filled out in advance. I have seen a lot of people who can't get a job because they don't have a form 57. You can buy your experience to fit the application, and in full, so you can just drop it off and not have to sit in the line as they stand there and wait much time which could be used logging down other jobs.

Thank you and many etceteras,

Scott Semans  
Anchorage, Alaska

## Jobs In Alaska

from  
P. O. Box 1565  
Anchorage, Alaska 99501



Daniel Leen's octagonal cabin near Fairbanks.

## Canada

### Agricultural Information

New Canadian immigrants who are setting up farms or looking for suitable sites should acquaint themselves with the publications of the various Departments of Agriculture. In addition to the Canada Dept. of Agric. each province has a department of its own. Most publications are free. The quality however, is subject to great variability. Some are excellent, some are disappointing. (For example "Ontario Vegetable Production Recommendations 1969" contains an excellent and complete variety of information covering all aspects of raising each individual vegetable, while "Ontario Insect Pests of Fruit Trees" is a very good book on insects with the use of insecticides.) The subjects covered range from very general ("Farming in Canada") to very specific ("Control of the Purple Black Cabbage Worm in Newfoundland").

The Canada Department of Agriculture will send copies of up to ten publications free to individuals. The List of Publications is available from: Information Division, Can. Dept. Ag., Ottawa. They also offer for sale at \$2 each a great series of soil surveys—very useful to anyone considering buying land for farming.

Each province has its own Department of Agriculture. In Ontario the provincial dept. will send up to ten free publications to each adult resident who requests. The list of publications is available from: Information Division, Ontario Dept. Ag. and Food, Parliament Buildings, Toronto.

Mr. and Mrs. Peter Rupprell  
Hearst, Ontario

- SELECTIONS: Canada Department of Agriculture publications
- 1296 Farming in Canada. 60 pp. illus. 1966
  - 1294 Climate of the Great Peace Region. 20 pp. illus. 1968
  - 888 Manures and compost. 16 pp. 1962
  - Catalogue of Plants: Sheep husbandry and equipment. 28 pp. illus. 1965
  - 1019 Sunflower Seed production. 24 pp. illus. 1967
  - 849 Plums for cold areas of Eastern Canada. 16 pp. illus. 1967
  - 1017 Culture of cigarette burley tobacco. 8 pp. illus. 1964
  - 1210 How to grow mushrooms. 16 pp. illus. 1965
  - 1127 Swine Breeding. 36 pp. illus. 1962
  - 1026 The dairy goat. 16 pp. illus. 1967
  - 861 Mushroom growing for beginners. 32 pp. illus. 1968
  - 1192 Gardening in the Yukon. 16 pp. illus. 1963
  - 1392 Booklice. 1 pp. 1967
  - 1362 How to grade fur. 96 pp. illus. 1968

- ONTARIO Department of Agriculture and Food
- 128 Bespeaking in Northern Ontario
  - 467 The Grape in Ontario
  - 502 Table Turnips
  - 94 Cultured Dairy Products
  - 476 Tractor Transmission Systems
  - 363 Farm Water Supply
  - 321 Wake Mink in Small Quantities
  - 226 Ontario Grape Growers
  - 226 2-4-D Can Damage Crops
- Monthly Seasonal Fruit and Vegetable Report

## British Columbia

These folks are compiling an information book about land acquisition in British Columbia. Write to:

Statement of Intent  
17 Boyd St.  
Victoria, B.C.  
Canada

The job market in Alaska is difficult for strangers to understand, since a vast amount of rumor and widely inaccurate information abound. Get-rich-quick stories are the most common, and few of them are true. Wages and salaries are significantly higher than in the Lower 48, but the high cost of living in Alaska offsets much of the difference. In most ways, the economy of Alaska is similar to that of the rest of the United States. If, however, you want to earn a lot of money in a short time, and are willing to work long and hard, then there are some opportunities in Alaska.

One way to get rich quick in Alaska is to get on the payroll of a company which is willing to pay overtime. It is not unusual for 40 hours of work needed to complete projects on a rush basis. The majority of these jobs, however, are located in "the bush," which is anywhere outside of the state's major urban centers. (Unseen construction usually proceeds in a normal daily manner.) In construction projects the most likely places to have the jobs which pay a lot of overtime, but most of their positions are filled by trained, experienced, union workers.

Other seasonal jobs, such as working on a fishing boat or in a cannery, may offer large amounts of money for a relatively short time, but the money will be well earned through grueling long hours of very hard work.

## Crown Lands

The Acquisition of Crown Lands in British Columbia (Land Series Bulletin No. 11) is the official word on procedure, regulations and advice to further information on obtaining government lands in B.C. It'd guess that the other provinces publish similar bulletins. Get it free from the Govt. of B.C. Printing Bureau, Victoria, B.C. Comes with 2 maps of B.C. (back to back). No. 1—Land Recording Districts and a list of Land Series Bulletins No. 1-10 which is required to give info on physical features and land use of subdivisions of the province). No. 2—in to Provincial Land Status Maps—each divides available from non-available lands in a small area of B.C.

The procedures for obtaining gov't land in B.C. sound arduous and in all cases except outright purchase, acres are limited to British subjects or immigrants. Nonetheless, far more land is available to be available in Canada than in the States. We'll be checking these rumors, gathering information and looking for land this year. We'll keep you informed.

Bill Dickinson  
Marysville, WN

## Immigration

The Canadian immigration department practically requires that a prospective immigrant have assurance of a job, evidenced by a letter from the employer, along with a bank statement (savings book, etc.) showing sufficient funds to support one self and family for a year or so, a couple of thousand will do, some folks have done this by borrowing such a sum from a bank and getting a statement to that effect, then withdrawing the sum, returning it to the owner and retaining the bank statement for presentation when needed. I am sure that the owner of the job in your favor. Even a small parcel (a city-type lot) which is available cheaply, through a lawyer, can help establish your sincerity in becoming a useful, purposeful, contented subject, which is what the immigration dept. wants.

—Tracy



RITUAL

"I'm coming, you guys, wait for me, I'm coming!" is what D.R. tried to say, but only garbled idiosyncrasy came out. And even if it hadn't, the man garbled it so badly that no one could have understood what he said, because of the ceaseless wind. While he was in a paved rest area just off the freeway, a hard, tree-lined road with white lines marking off the parking places, and concrete picnic tables, he saw people standing beyond a curb. At the end of the paved area a big trailer-truck was parked parallel to the curb across a couple dozen diagonal parking lines. Near it a family surrounded a table, and a man in a suit and tie, the Greek had established himself seven or eight tables down the line from the family, where he was preparing to sit his daily food ritual. He usually did the ritual in a restaurant, but since they were stopped, and because everybody's nerves seemed a little on the edge, the Greek felt a soothing ceremony was called for, to cool the vibe a little, and bring everybody together.

When they first stopped Estelle wandered off by herself among the dunes, but when she heard D.R.'s yell and saw him having trouble negotiating his way from the bus to the table, she went back to help him along. His arm around her neck, carrying him like a drunk, they staggered up to the table in time to observe the Greek setting up his scene.

It was a simple scene to set up because the only food involved was walnuts and water, and no dishes or utensils were involved. The Greek carried his walnuts, already hulled, in a leather bag about the size of a woman's purse. The water was in a gallon plastic jug with a label on it that said, "Pure Alaskan Drinking Water. Rich in Natural Minerals." The Greek unfolded a black cloth about the size of a pillow case and spread it on the ground. He set the jug and drank from it. When he'd chugged and placed the nut bag diagonally across from it with the open top toward the water. As he picked up his first walnut the Greek bowed to the east, and then three times to the west. He then picked up the jug and drank from it. When he'd chugged and swallowed the walnut he closed his eyes and held his palms together in front of his face in an attitude of prayer.

"F...f...f..." D.R. stammered. "F...f...f..."

The Greek opened his eyes to see who was speaking. Although he'd not been praying about five seconds he frowned as if he'd been disturbed from a deep sleep.

"What's he trying to say?" the Greek snapped.

"He's probably trying to say far out," said Estelle. "D.R. says far out a lot."

"Why doesn't he go ahead and say it, then?"

"I don't know," said Estelle. "Ask him."

"Hoy," yelled the Greek. "Get away from those walnuts." D.R. had turned away from the Greek and was grooving on the leather walnut bag. The rough side of the leather was on, so that when you rubbed your finger across it, it made a pattern that seemed to D.R. extraordinarily beautiful. He heard the Greek tell him to stay away, but it surprised him when the Greek took him roughly by the arm.

"You're not supposed to get into the walnuts until we've prepared our hearts and minds for the walnuts." "Kindly wait."

The Greek closed his eyes and folded his hands and began again to prepare their hearts and minds to receive the walnuts. Stunned as he was by the Greek's heart and mind were already prepared, but he certainly did not want to disrupt the ritual. The ritual was beautiful to D.R. The Greek was beautiful, the walnuts were beautiful, all the world around was beautiful, beautiful.

Including himself. D.R. folded his hands and closed his eyes, and listened to the Greek's prayer.



## Stalking the Wild Asparagus Stalking the Blue-Eyed Scallop Stalking the Good Life

*Euell Gibbons honestly makes you wonder why we haven't been nibbling cooperatively upon the wild earth all our lives. We'd rather fight and hassle over manufactured products than dine directly on what we can't prevent from flourishing freely around us. Take a congenial trip with Gibbons to the woods, to the beach, anywhere except the parking lot, and let him feed you, turn and head.*

—SB

### Stalking the Wild Asparagus 1962/70; 303pp.

\$2.95 postpaid

### Stalking the Blue Eyed Scallop 1964/70; 332pp.

\$2.95 postpaid

### Stalking the Good Life

Euell Gibbons  
1971; 248 pp.

\$6.95 postpaid

from:  
David McCay Company  
750 Third Avenue  
New York, New York 10017  
or WHOLE EARTH CATALOG

## Edible Wild Plants of Eastern North America

*Everything east of the Great Plains and north of the Florida peninsula that you can eat. It's a technical sort of book, with a sweet attitude.*

—SB

### Edible Wild Plants of Eastern North America

Merritt Lyndon Fernald, Alfred Charles Kinsey, Reed C.

Hollins  
1943; 1958; 452 pp.

\$10 postpaid

from:  
Harpur & Row Publishers, Inc.  
48 E. 33rd St.  
New York, N.Y. 10016

or WHOLE EARTH CATALOG

### Edible Native Plants of the Rocky Mountains

J.D. Harrington  
1967; 388 pp.

\$10.00 postpaid

from:  
University of New Mexico Press  
Albuquerque, New Mexico 87106

or WHOLE EARTH CATALOG

### Russian Thistle

The young thistles make a very good potherb. Served with salt, pepper and lemon or vinegar we found it to be mild, pleasant and crisp tasting, making one of the very best potherbs we have ever tasted. They can be dressed up with fried bacon and boiled eggs like spinach or creamed and served over toast. Because of the bland taste they can be mixed to an advantage with more tangy plants such as mustard.

### Wild Edible Plants

There is a need for a good, big, colorful book on the wild edible plants of the United States, north America, planet, and so forth, so far no one has wanted to tackle the job, mainly I suppose because a book like that would be so expensive to produce that getting the price down for someone who wanted to forage for edible goodies would be tough. This book is neither colorful nor planetary, but if you are going to peck around some natural produce from the rocky mountains west, you should be able to use it to help you both identify and cook your meals. The line drawings are abundant, precise, carefully executed.

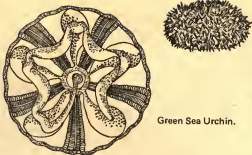
—jd

Wild Edible Plants of  
the Western United States  
Donald Kirk, Janice Kirk  
1970; 307pp.

\$3.95 postpaid

from:  
Naturegraph Publishers  
Heraldsburg, Ca. 95448  
or WHOLE EARTH CATALOG

For the number of different kinds of food it produces there is no plant, wild or domesticated, which tops the common Cattail. In May and June the green bloom spikes make a superior cooked vegetable. Immediately following this comes the bright yellow pollen, fine as sifted flour, which is produced in great abundance. This makes an unusual and nourishing ingredient for some flavorful and beautifully colored porridges and muffins. From fall until spring a fine, nutritious white flour can be prepared from the central core of the rootstocks for use as breadstuf or as a food starch. On the leading ends of these rootstocks are found the dormant sprouts which will be next year's cattails. These can be eaten either as a salad or as a cooked vegetable. At the junction of these sprouts and the rootstock there is an enlarged starchy core the size of a finger joint. These can be roasted, boiled or cooked with meat. In the spring the young shoots can be yanked from the ground and peeled, leaving a tender white part from six to twelve inches long which can be eaten raw or cooked.



Green Sea Urchin.

You must develop skills in finding these perfect and formerly unused campgrounds. One way to do it is to get off the beaten track. Study the map and find a small road that leads off the one you are following, then a smaller road that leads off of it, and finally a still smaller road trailing off that. On this last little road one is almost certain to find an ideal camping spot where permission is either not required or easily obtained.

I don't guarantee to make the shelling of black walnuts easy, but I have found that it gets progressively easier with practice. If you stand the nut pointed end up on a solid surface and hit it a sharp blow with a hammer, it will crack into two halves. Stand each half, again pointed end up, and strike it again, and you will have broken it into quarters. Strike each quarter again on the pointed end, and it will break crosswise into eighths this time—at which point the nutmeats will fall out.

### COLD DRINKS

In this group are included the various home-brewed drinks such as birch-beer, and the simple summer drinks prepared from acid fruits and used like lemonade. We have not entered the very extensive field of distilled liquors, and there are some people who might object to indication of the ingredients of birch-beer, root-beer and other mildly alcoholic beverages, but no one can object to pink lemonade prepared by bruising Sumach-berries in water or from the juice of Prickly-Pears or Barberries. The number of these refreshing cold drinks is larger than we should have imagined; they may be prepared from the following:

Spruce (for beer), p. 80  
Hemlock (for beer), p. 80  
Sandbar (grain), p. 107  
Chufa (tubers), p. 108  
Cat-brier (root), p. 142  
Birch (for beer), p. 153  
Bay Apples, p. 205  
Barberries, p. 208  
Mountain-Ash (berries), p. 230  
Raspberries, p. 236  
Dewberries, p. 236  
Blackberries, p. 236  
Cherries, p. 240  
Honey-Locust (pods in beer), p. 243  
Locust (flower), p. 248  
Crowberries, p. 261  
Sumach (berries), p. 262  
Red or Black Mulberries, p. 163  
Mountain-Sorrel (leaves), p. 169  
Sorrel (leaves), p. 171  
Sea-Purslane, p. 169  
Maple (sap), p. 269  
Grapes, p. 272  
Prickly-Pears, p. 276  
Sospberries, p. 277  
Buffalo-berries, p. 277  
Spikenard (root), p. 282  
Wild Sarsaparilla (root), p. 283  
Pissawee (leaves), p. 305  
Box-Grasses, p. 317  
Periwinkles, p. 321  
Yellow Birdseye, p. 344  
Elderberries, p. 349

### Edible Native Plants of the Rocky Mountains

This book is an excellent listing of the edible plants of the Rockies. It provides recipes for the preparation of beers and wines, jams and preserves, the cooking of greens and the preparation of dyes, as well as brief histories of the plants' use by historic and prehistoric peoples. The book contains drawings of the plants in their flowering or fruiting stage and lists them by common name as well as scientific name for ready reference.

For anyone seriously considering living off the land, trying his hand at new and exciting dishes or cutting down on the grocery bill, this book is a must.

[Reviewed by Patricia Roberts]

### Tragopogon species (4) (Sunflower Family) Goatshead, Salsify, Oyster Plant

**Preparation and Uses:** The fleshy roots may be eaten raw or cooked, tasting like oysters or parsnips, according to whom you are speaking. When only a few inches high the young stems, along with the bases of the lower leaves may be used as potherbs.

The coagulated milky juice of these introduced plants was used for chewing by various Indian groups. The juice was considered a remedy for indigestion. In olden times in Greece, Italy, and other Old World areas linen pads were soaked in the distilled juice and applied to bleeding sores and wounds. Piny records that the juice, when mixed with woman's milk, is a cure-all for disorders of the eyes. *T. porrifolius* is the cultivated Salsify or Oyster Plant.

**Habitat and Distribution:** The Goatsheads are found in open ground throughout the West.

**Description:** These plants are tall, stout, biennial or perennial herbs with fleshy tap-roots, and entire, grasslike, clasping leaves. The yellow or purple flower heads are borne on tall, leafy stems: the matured head resembling a fluffy, giant, dandelion head.

## Mushroom Hunter's Field Guide Savory Wild Mushroom

Finding a strange, slimy, luminous colored growth on dark rotting wood is *surprise and pleasure*; to expect that experience into identifying it and possibly **EATING IT** is even better. For the beginner one batch of mushrooms can occupy a whole day, from finding them, through waiting for a good spore deposit and making a decision, to cooking them. An efficient guidebook is essential to avoid frustrations.

### The Mushroom Hunter's Field Guide

Alexander H. Smith  
1958; 1967; 264 pp.

\$8.95 postpaid

from:  
University of Michigan Press  
615 East University  
Ann Arbor, Michigan 48106  
or WHOLE EARTH CATALOG

### The Savory Wild Mushroom

Margaret McKenny  
1962; 133 pp.

\$4.95 postpaid

from:  
University of Washington Press  
Seattle, Washington 98105  
or WHOLE EARTH CATALOG

On a tramp through the fields and forests, carry with you a small jar of butter, creamed with salt and pepper. On finding any edible mushroom (except morels or *alfinsides*), collect a few dry sticks and fire them. Split a green stick (alder or willow) at one end. Put the mushroom in the cleft, hold it over the fire until tender, season with the butter. Eat from the stick.

from "The Savory Wild Mushroom"

The McKenny book is compact, but not especially well organized for use. It contains clear and concise descriptions of 83 varieties of fungi, some of them peculiar to the Puget Sound region, the rest common throughout the U.S., and 33 black-and-white and 48 color photographs. There is also an article on mushroom poisons and the many fine recipes make one want to rush to the woods and immediately gather baskets of Chanterelles, Morels and Ceps. Not so easy!

Smith's book, which I prefer, is more technical in language and scope, although, as a field guide, it avoids identification methods involving microscopes and chemicals. It is much more complete, covering 188 varieties with a black-and-white photo of each plus 84 color photos, and it is organized in keys which are super to use if you like being methodical. It is not necessarily true, however, that it is quicker to follow the system in thumbing through either book, as in wandering in the woods, luck and perseverance further.

(Suggested and reviewed by Sandra Tcherperin)



164. COPRINUS ATRAMENTARIUS (inky cap)

Edibility. Edible, but some people experience a peculiar type of intoxication from eating this species and afterward drinking an alcoholic beverage. I have now discovered three people in Michigan with this type of sensitivity.

from "The Mushroom Hunter's Field Guide"

## A Key to the American Psilocybin Mushroom magic mushroom information, not found in normal mushroom guides.

-fd



Psilocybe quebecensis

## A Key to the Psilocybin Mushroom

second Enos  
1970; 75pp.

\$5.00 postpaid

from:  
Church of the One Sermon  
8135 Lincoln Street  
Lemon Grove, California 92045

or WHOLE EARTH CATALOG

All but one of the species have revealed an interesting and striking chemical characteristic that is very constant in fresh specimens. When the fruit are scratched, bruised by handling, or injured in any way they stain blue, or, if the surface color is yellowish, green or greenish blue. This harmless phenomenon is apparently caused by the oxidation of an enzyme in conjunction with the psilocybin and is a main point of identification. Certain chemical reagents are known to accelerate this bluing. The best of these indicators, p-methylaminophenol sulphate or metol, gives a constant and strongly positive reaction on the flesh of the stem, becoming very deep violet within 1-30 minutes. This chemical, which is in crystal form, is inexpensive and can be prepared from any chemical shop or photographic shop that handles darkroom supplies. Metol will dissolve in about 20 times its weight of distilled water, and the solution must be used immediately since it is unstable. A canteen of distilled water and a small plastic bottle are all the tools needed to make up the solution in the field. Be sure to shake the solution vigorously to shorten the dissolving time.

## Mycological Societies

Your coverage of mushroom identification books is fine, but I have graduated from Smith and McKenny (both of which I have) to *Mushrooms and Truffles* by Morten Lenzen and F. Bayard Hov, Dutton. It is very complete and has color painting instead of photographs, which I like, and every species is shown in color. I belong to the San Francisco Mycological Society and I recommend that anybody who is interested in mushrooms join the nearest mycological group for help with locating and identifying. Write to the North American Mycological Association, 4245 Redwood Road, Portsmouth, Ohio 45662, for the address of the nearest group. There is also a mail-order bookstore which has everything about mushrooms (and also many books on plants, and some assorted other scientific subjects): Lew Heymann, P.O. Box 6448, Carmel, Calif. 93921. His catalogs are free and fantastic.

Sent by

Mary Schooner  
San Francisco, CA

## Edible and Poisonous Mushrooms of Canada

The world is full of them. They grow in lawns and woodlots, by roads and rivers, in parks and pastures, but most abundantly in the piney woods in the fall. Most people do not see them. They are there, but invisible; outside the range of conscious awareness. Once you become aware of them, they seem to spring up in droves.

For the beginning pot-hunter, *The Savory Wild Mushroom* (Margaret McKenny, U. of Wash. Press) or *The Mushroom Hunter's Handbook* (Alexander Smith, U. of Mich. Press) are excellent technical guides. Pretty soon you can spot an Amanita, Agaricus, Russula or Coprinus or such off-beat types as Chanterelles and Boletes. But there comes a day when, after an afternoon's ramble thru a park or forest you come home with about thirty different species, most of which are not in the book. Now what?

There are a number of older and more technical manuals which can usually be found in libraries. *The Mushroom Handbook* by Louis Kreiger has been reprinted by Dover in paperback and so is readily available, but is rather difficult to use.

On a recent trip to Canada I found what I think is the best new book on the subject, *Edible and Poisonous Mushrooms of Canada*. It is authoritative, but still readable, though you might have to keep one finger in the glossary at first. There are new and simplified keys for tracking down over 400 different species, and best of all, most of them are illustrated with color photos taken in the field. With this book, and a lot of patience, you should become a local expert. (Reviewed by David Wainstein, Suggested by Barbara Kirshenblatt-Gimblett)

## Edible and Poisonous Mushrooms of Canada

J. Walton Groves  
1962; 299 pp.

\$7.75 postpaid

from: Queen's Printer  
Information Canada  
Publishing Division  
Ottawa, Ontario  
Canada

or WHOLE EARTH CATALOG



Figure 266. Mycena alkalina.

## Fruits of Hawaii

After *dear research* I can report that it's true, you can live off the land in Hawaii for very little. Fruit grows everywhere, and this book is an excellent guide to which of it is edible and where to find it and how to cook it. If you liked the early 60's, you'll love Hawaii.

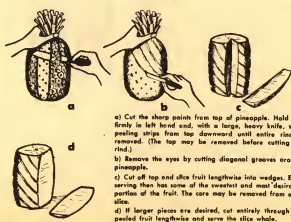
-SB

## Fruits of Hawaii

Carey D. Miller, Katherine Bazzore, Mary Bartow  
1966; 229 pp.

\$4.50 postpaid

from: University of Hawaii Press  
535 Ward Ave.  
Honolulu, Hawaii 96814



- Cut the sharp point from top of pineapple. Hold top firmly in left hand and, with a large, heavy knife, short peeling strips from top to bottom until entire leaf is removed. (The top may be removed before cutting off leaf.)
- Remove the eyes by cutting diagonal grooves around pineapple.
- Cut off top and after fruit lengthwise into wedges. Each serving then has some of the skin and most desirable portion of the fruit. The core may be removed from each slice.
- If larger pieces are desired, cut entirely through the peeled fruit lengthwise and serve the slices whole.



PRAYER

The Way is uncharted. The map cannot be spoken. Names are in words, but nature lives only in nature. The source of creation is nameless, but the matrix of all is named. The secret eludes eyes clouded by longing. Prejudiced eyes must stop look at the surface. The secret is self-contained.

May we be mindful of these truths. May we become pure enough to pass through the gate to the root of the universe.



## Design with Nature

Ian McHarg is a landscape architect, and as a problem solver, he has taken on the huge challenge that ecology obviously represents to the land planner, making a positive constructive step towards a resolution. From his extensive knowledge of both landscape architecture and the biological science of ecology he has developed a methodology that no responsible land planner, city planner, or large land developer can overlook (for any affected citizen allow to be overlooked). Through a systematic land easily reproducible method Mr. McHarg investigates the relevant ecological restraints inherent in any large planning area. Physiography, hydrology, geology, topography, flora and fauna ecology, and other natural restraints are individually mapped for the area under consideration. These restrained portions of the area are mapped in varying transparent shades according to the degree of restraint the consideration warrants. By overlaying these numerous graded maps, a final map is evolved which designates where to not develop, where light development is compatible with the land, where specifically restrained development is permissible, and where other types of development (recreational, medium and high density) would be least objectionable.

Mr. McHarg realizes that the great "scars" appearing on the face of the Earth, and the "jaws" that reside within these scars are a tremendous threat to Earth's existence. But, he also realizes that growth is going to take place. To meet this growth with only derivative criticism will do little. Only by developing the attitude of "steward" towards Earth and acquiring the tools and knowledge that are needed to properly care for her, will we survive.

Integrated with chapters demonstrating the power of his method (including examples of projects his firm has done for clients and cities all over the country), the author describes his experiences and feelings in moving chapters that express his love for Earth, and the profound reasons behind this love.

It is a beautiful book, beautifully written and illustrated, demonstrating that enlightened man can properly care for his life giver, Earth.

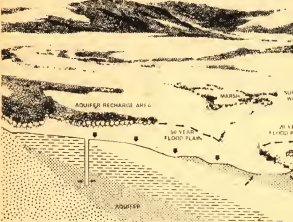
(Reviewed by Vic Conforti)

## DESIGN WITH NATURE

IAN L. MCHARG

Design with Nature  
Ian L. McHarg  
1969, 197 p  
\$19.95 portapaid

from:  
The Natural History Press  
501 Franklin Avenue  
Garden City, New York 11530  
or WHOLE EARTH CATALOG



## Landscapes

Despite its title, thank God this book isn't another moralistic plainer talking about landscapes.

Rather, it is more like a rural historian, who is philosophical, talking about suburbs, highways, shopping centers, neon signs, and poverty, not as enemies, but for what they are. "They are us."

Though it isn't mentioned until p. 132, the important focus of the book (especially for Whole Earth Catalog readers) is the following reality:

At present, fifty-eight percent of our population lives in towns of 50,000 or less; more Americans live in towns of 10,000 or less than live in all of the cities of a million or more; and one out of every four Americans lives in a place with less than 2,500 inhabitants. Most of us, in brief, still live in a small city or in a semi-rural setting, and the chances are that even in 1975 the proportion will still be sizeable.

If I had been the editor of this book, I would have wanted to arrange the chapters differently and put some extra passages in between Jackson's essays. For example, in one essay, he makes a fascinating distinction between (1) farmers, (2) rural residents, (3) wilderness recluses, and (4) city dwellers, using quotes from Thoreau and T. Jefferson. And in another essay (which was the most absorbing one for me), called "The Westward-moving House," he traces an American family through 300 years of home-building history, beginning in the late 1800's in New England (Nehemiah Tinkham, with wife, Submit Tinkham, and six children), through Piny Tinkham of Illinois, Illinois, and concluding in the 1900's with Rex Tinkham of Brownsville, Texas. And my impulse would

## PHENOMENA

Surface water and riparian lands

Marshes

50-year floodplains

Aquifers

Aquifer recharge areas

Prime agricultural lands

Steep lands

Forests and woodlands

## RECOMMENDED LAND USES

Ports, harbors, marinas, water-treatment plants, water-related industry, open space for institutional and housing use, agriculture, forestry and recreation.

Recreation

Ports, harbors, marinas, water-treatment plants, water-related industry, agriculture, forestry, recreation, institutional open space, open space for housing.

Agriculture, forestry, recreation, industries that do not produce toxic or offensive effluents. All land uses within limits set by percolation.

As aquifers.

Agriculture, forestry, recreation, open space, housing at 1 house per 26 acres.

Forestry, recreation, housing at a maximum density of 1 house per 3 acres, where wooded.

Forestry, recreation, housing at densities not higher than 1 house per acre.

be to show how this essay is connected with the other one—also how both are related to current migrations and attitudes of many "better world" advocates of today. But, on the other hand, what the hell could I say to a family living in a remodelled, but to a non-profit group setting up a business on a 20-acre farm, or to any other reader, in fact, about the relevance of "old-fashioned" caring for the land compared with "new-fashioned" use of the land. Maybe it's better that readers dig into this book by themselves for meanings that the editor left out.

## Landscapes

J.B. Jackson  
J.B. Zube, ed.  
1970, 160 pp.

\$6.00 portapaid

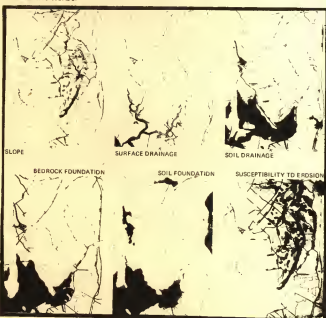
University of Massachusetts Press  
Munson Hall  
Amherst, Massachusetts 01002  
or WHOLE EARTH CATALOG

Somewhere (over western Kansas, perhaps) it begins to grow dark and at first all one can see is a dark mottled brown world under an immaculate sky of deep blue steel; then one flies over some small rectangular pattern of scattered lights—a farm town—and out of it, like the tail of a comet, stretches a long sinuous line of lights of every color and intensity, a stream of concentrated multi-colored brilliance, some of it moving, some of it winking and sparkling, and every infinitesimal point of color distinct in the clear night air. The stream pours itself into the black farmlands, into the prairie, and vanishes. This of course is the roadside development seen from an altitude of several thousand feet: the most beautiful and in a way the most moving spectacle the western night can offer, because for the first time you see that man's work can be an adornment to the face of the earth.

One cannot predict the fate of such a book as this. But on its intrinsic merits I would put it on the same shelf that contains as yet only a handful of works in a similar vein, beginning with Hippocrates, and including such essential classics as those of Henry Thoreau, George Perkins Marsh, Patrick Geddes, Carl Sauer, Benton MacKaye, and Rachel Carson. This is not a book to be hastily read and dropped; it is rather a book to live with, to absorb slowly, and to return to, as instant solutions are sought. It lays a fresh course for a civilization to action, it is not for those who believe in "crash programs" or plan wilyly in being. Here are the foundations for a civilization that will replace the polluted, bulldozed, machine-dominated, dehumanized, explosion-threatened world that is even now rising and disappearing before our eyes. In presenting us with a vision of organic abundance and human delight, which ecology and ecological design promise to open up for us, McHarg revives the hope for a better world. Without the passion and courage and confident skill of people like McHarg that help might fade and disappear forever.

Lewis Mumford

This book is a personal testament to the power and importance of sun, moon, and stars, the changing seasons, seedtime and harvest, forests, rain and rivers, the oceans and the forests, the creatures and the herbs.



These indispensable creatures, performing their vital role in the nitrogen cycle, deserve to be household words, man's great heroes. Yet sadly those who named them had no thought of public honor and familiarity and called them Azotobacter and Clostridium. Rhizobium and Nostoc.

Some urban geographer will be able to explain why the Stranger's Path becomes more respectable the further it gets from its point of origin; why the lophophores and brachiopods and the poorest among the second-hand shops (now euphemistically called loan establishments—the three golden balls are a thing of the past), the dirtiest and steamiest of Greasy Spoons tend to cluster around those first raffish streets near the depot and bus and truck terminals, and why the city's finest hotel, its most luxurious night club, its largest restaurant with a French name and illustrated menus are all at the other end. But so it is: one terminus of the Path is Skid Row, the other is the local Great White Way, and remote though they seem from each other they are still organically and geographically linked. The moral is clear: the Path caters to every pocketbook, every taste, and what gives it its unifying quality and sets it off from the rest of the city is its eagerness to satisfy the unattached man from out of town, here either for a brief bout of pleasure or on some business errand.

George Wald once wrote facetiously that "it would be a poor thing to be an atom in a Universe without physicists. And physicists are made of atoms." A physicist is the atom's way of knowing about atoms. Who knows what atoms yearn to be, but in we are their property. It would be just as sad to call the organism in a universe without ecologists, who are themselves organisms.

Every sizeable community exists partly to satisfy the outsider who visits it. Not only that; there always evolves a special part of town devoted to this purpose.

Some urban geographer will be able to explain why the Stranger's Path becomes more respectable the further it gets from its point of origin; why the lophophores and brachiopods and the poorest among the second-hand shops (now euphemistically called loan establishments—the three golden balls are a thing of the past), the dirtiest and steamiest of Greasy Spoons tend to cluster around those first raffish streets near the depot and bus and truck terminals, and why the city's finest hotel, its most luxurious night club, its largest restaurant with a French name and illustrated menus are all at the other end. But so it is: one terminus of the Path is Skid Row, the other is the local Great White Way, and remote though they seem from each other they are still organically and geographically linked. The moral is clear: the Path caters to every pocketbook, every taste, and what gives it its unifying quality and sets it off from the rest of the city is its eagerness to satisfy the unattached man from out of town, here either for a brief bout of pleasure or on some business errand.

Many fathers have helped preserve this kind of communal life in Santa Fe. The city fathers had had nothing to do with it and there is a large and venerable element that is ashamed of the town's immaturity. But by lucky chance, possessing a city which is gregarious, and at the same time hostile to police regulation, and which remains loyal to a long-established tradition of group behavior. Yet something of the color and vitality could be introduced to many other American cities; it is merely a matter of establishing (or re-establishing) the principle that streets are not intended solely for motor traffic, that the principle that streets are not intended solely for motor traffic, from children's games to funeral processions and endless lotteries the sun, all civic architecture is essentially nothing but an appropriate background for this life; and city planning is chiefly justified when it helps preserve and foster informal communal activities.

## Arcoology

If I get it right [and getting it at all is something; it takes either lots of work or none at all] Soleri sees the next step in evolution as man's job. He sees that step manifested in an organism and that organism is the city. Soleri says that the first part of his book is the most important. But on seeing the second part it's very difficult to muster much time for the first part. It pays, though, nicely. Soleri refers to Teilhard de Chardin in approaching the understanding of man as a cosmic problem by ascending from physics, chemistry, biology and geology. Western man must rise from his technology and one (I think) way is by being aware (of it) but ignoring it at the same time. The manifestation of a process like this is, I think, a series of drawings like that of the second part of the book. These drawings are like doorways, they're of fantastic cities, wholly improbably but obviously, cosmically, possible. In fact, they are made real just by their presence in one place (the book) and by the interrelatedness of one project to the next, page to page, with seminal sketches appearing in the corners here and there. What's most fascinating is the next obvious steps: the Cosanti buildings in Arizona and Arcosanti, about to begin. He's not starting all at once, big money style but the way cities have always started: little by little. Like *Nieuw Amsterdam* on the tip of Manhattan Island or whatever city began at whatever river crossing or natural harbor, Soleri is beginning at a crossing of cosmic consciousness.

[Reviewed by Ron Williams]

## Sketchbooks of Paolo Soleri

If you're into Soleri very much you'll want to get into his head. His notebooks will do it for you. The man dreams and schemes cloudbursts of passionate structure.

—SR

Sketchbooks of Paolo Soleri  
1971: 418 pp.

\$9.95 postpaid

from:  
Massachusetts Institute of Technology  
Publications Office  
77 Massachusetts Ave.  
Cambridge, Mass. 02139

or WHOLE EARTH CATALOG

THE PORCH IS NOW OPEN ON INFINITY, NO MORE ON THE BUSY-BODIES OF MORE OR LESS TAILORED DIMENSION, WHICH CLOSENESS & NEED-SENTIMENTS ARE INALLENABLE BUT ONLY PART OF SUCH INFINITY. ONE COULD SUGGEST THAT AS AN OPENING THE DOOR ON THE HOUSE OF WORSHIP ONE EXPECTS & FIND A PLACE OF SOMEHOW RARE PARAMETERS TO WHICH LIFE LENDS MORE OF AN ABSTRACTION THAN ANY PARTICULAR: SO THE TOTAL, ONE SIDE OF THE DOME "WINDOW" WHICH ON THE INFINITY HOUSE OF WORSHIP WHICH

CATHARTIC MOMENTUM IS IN REASON OF LIGHT & SEASON—HOURS—ATMOSPHERE—WEATHER... & SPACE & SPACES

## The Climate Near the Ground

This appears to be the definitive text on microclimate: the climatic conditions within 6 feet or so of the earth's surface. The climate in this narrow stratum differs significantly from the overall climate, and the book analyzes, in some detail, the relation of soil, water, vegetation, topography, man and animals to the microclimate.

—Lloyd Kahn

[Suggested by Steve Baer]

## The Climate Near the Ground

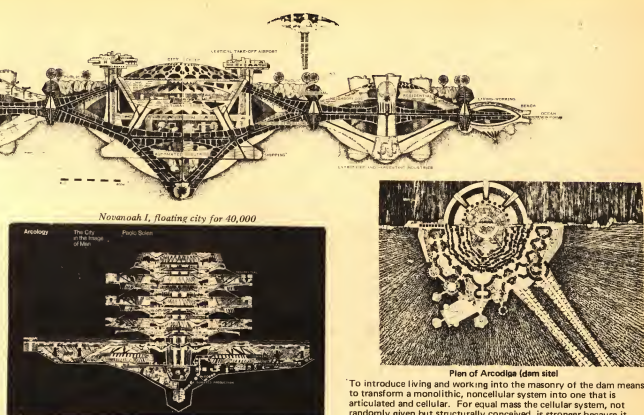
Rudolf Geiger  
1966: 611 pp.

\$11.50 postpaid

from:  
Harvard University Press  
79 Garden Street  
Cambridge, Mass. 02138

or WHOLE EARTH CATALOG

BY RUDOLF  
GEIGER  
THE  
CLIMATE  
NEAR THE  
GROUND



## Arcoology: The City in the Image of Man

Paolo Soleri

1968: 121 pp.

\$25.00 postpaid

or

from:  
The Cosanti Foundation  
6433 Doubtless Ranch Road  
Scottsdale, Arizona 85253

The M. I. T. Press  
80 Ames Street, Room 765  
Cambridge, Massachusetts 02142

or WHOLE EARTH CATALOG

## Plan of Arcoside (dam steel)

To introduce living and working into the masonry of the dam means to transform a noncellular, noncellular system into one that is articulated and cellular. For equal mass the cellular system, not randomly given but structurally conceived, is stronger because it allows selectivity of orientation and dimensionality.

If one then considers the 1:7 ratio of redundancy in the safety coefficient in the dams built in the United States, one can see the wealth of schemes that can effectively and magnificently transform the blind mass into a singing environment.

few people have gotten to see Paolo Soleri's exhibit of his work at the Whitney Museum in New York, and not too many can put out \$26 to buy his book (which is well worth it...), but for \$1 you can purchase his poster which comes out each fall. Soleri runs a summer school program for architecture students, each year he puts out a poster in the "ultramarine" advertising his school, and generally telling what they're into, well anyway, it's a neat poster every year and he's now up to "ultramarine no. 11".

and 11 is:  
cosanti foundation  
6433 east doubtless road  
scottsdale, arizona 85253

for zimmerman  
work坊, virginia



LOVE

"Amen."

The Greek bowed to the west and he bowed to the east, and came up filled with love for everything in the universe. When he saw D.R. leaning against the picnic table with what he took to be a forlorn look on his face he felt apologetic for coming on to him so hard during the ceremony. To make amends he went over and hugged him.

"I love you, man," said the Greek. "I love you, and you and you too, you're all just lovely, and I love you. I love the bus, I love those people down there at the other table, I love that big truck, and its driver, and the drivers of all those cars going by. I love the desert, I love the sky, I love the mountains in the distance, the oceans beyond the mountains, and all who dwell in the lands beyond the oceans. I love all sentient beings everywhere, regardless of their race, color, creed, place of national origin, or species."

"How perhaps you wonder how it is that a mere mortal such as I have become capable of such boundless love for everything in all creation. I mean, how is it, do you suppose, that a single individual is able to sustain a feeling of love for absolutely everything, twenty-four hours a day, every day, all his life? The answer, my friends, is simple. You all of course know what the ego is. How is it first developed out of the formless void that is the childhood psyche, and then, through strength of the adult will, through ceaseless practice of the yogic disciplines, it is at last obliterated so that that which was torn asunder by the traumas of leaving the mother's womb has been reconciled and made whole again, where all is one and one is all, where the twin not only must but embrace and join together in eternal union of individual consciousness with the cosmic life force."

Well, love is bound up in the workings of the ego in a fundamental way. It is the child of contradiction, and this is tragic because the way out is actually so simple and easy to see you really feel embarrassed when it finally dawns upon you. The answers to all the great questions are really contained just as the simple way of life is the proper path enroute to the Greatest Question. Simplify! Simplify! Simplify! said Thoreau, and he was right.

(continued)

Soleri  
Land Use

83



# Shelter

## Evolution and Design in the Plant Kingdom

**Live dwellings—how soon?** Houses of living vegetable tissue. The walls take up your CO<sub>2</sub> and return oxygen. They grow or diminish to accommodate your family changes. Add a piece of the kitchen wall to the stewpot. House as friend. Dwell and dwelling domesticate each other. Society for the Prevention of Cruelty to Structures.

Engineering lately has been inspired by bionics, the analysis of living systems for their technological accomplishments that might be borrowed by us. So far, plants have been overlooked.

**Heyl! Plants.**

Start with this systemic lovely book and the nearest seed pod.

—SB

## Evolution and Design in the Plant Kingdom

C. L. Duddington  
1969, 298 pp.

**\$7.95** postpaid

from:  
Thomas Y. Crowell Company  
201 Park Avenue S.  
New York, N.Y. 10003

or **WHOLE EARTH CATALOG**



**Fig. 45.**  
Climbing hooks of  
*Anticlinale*



**Fig. 10.**  
Longitudinal section of  
part of a tracheid of the yew,  
showing the tertiary thickening bands  
that give the wood of the yew  
its great strength and elasticity

The mechanical stresses that occur in the branch of a tree may be presumed to be the same as in any other cantilever. The material towards the top of the branch is in tension, while the material near the bottom is in compression. If it is to keep a straight course the wood must resist both these stresses equally. How it maintains its apparently predetermined course we do not know.

If we study the wood on the lower sides of branches of coniferous trees, or on the upper sides of branches in broad-leaved trees, we find that it has a distinct structural difference from the rest of the wood. This wood is called 'reaction wood', and it differs from normal wood both anatomically and chemically. In conifers, where it is called 'compression wood', it is darker than normal wood, and the walls of the cells are more heavily impregnated with lignin.

The tracheids are shorter than usual, and the wood is denser. The secondary lignified cell wall which is laid down inside the primary wall consists of three layers in normal wood, but in compression wood there are only two layers, the innermost layer missing.

In branches of broad-leaved trees there is no compression wood, but the wood laid down on the upper side of the branch, known as 'tension wood', shows modifications in structure. The vessels are narrower, and the fibres have a thick inner layer—the gelatinous layer—which refracts light very readily and is composed mainly of cellulose instead of lignin.

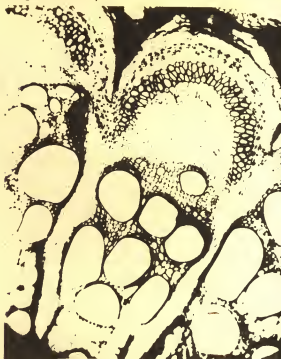
Recent work has indicated that the formation of reaction tissue is not limited to the wood, for the secondary phloem, the cortex and the cork cambium may also show modified growth.

The study of reaction wood is a relatively new branch of botany, and much remains to be found out before we shall be able to claim to understand its formation fully. Its function, if any, in the life of the plant is at present uncertain, but several prominent workers in this field have expressed the opinion that reaction wood is in some way responsible for the fact that branches do continue growing in the direction in which they start, and do not change their direction of growth as a result of the stresses set up by their own weight.

Water is not sucked up from the leaves, nor is it hoisted from below by root pressure, except, perhaps, in small plants. Our third possibility, that it is pumped up by some intermediate cell mechanism, also appears to be without foundation. One is tempted to say that it gets up by the grace of God, but scientists are chary about calling upon divine intervention in order to explain awkward facts. We must look again at our various possibilities (or impossibilities) and see whether we have missed something.

Turning once more to the theory that water is raised from above we can see at once that there is plenty of force available for the job, for transpiration sets up an osmotic gradient in the mesophyll of the leaf with pressures well above the ten or twelve atmospheres that we need for raising water even to the top of a Sequoia. The trouble begins when we try to see how it is applied. Suction just will not do, for we cannot get around the fact that the water barometer cannot exceed thirty-three feet. Some other phenomenon must be involved; something that can enable the pull in the leaves to reach right down into the roots and haul the water up. The answer to the problem seems to lie in a theory first put forward some time ago by Dixon and Jolly, known as the 'cohesion theory'. A solid

Longitudinal section of part of a tracheid of the yew, showing the tertiary thickening bands that give the wood of the yew its strength and elasticity.



substance is held together by forces of cohesion between its molecules, which form a rigid crystal lattice that resists being broken. In a liquid the forces of cohesion do not hold so closely. The molecules can slide about over one another but they are still held by cohesive forces and prevented from escaping altogether. Only when a molecule gathers to itself sufficient kinetic energy (energy of movement) to overcome the force of cohesion does it fly away completely—in other words, vapourize.

According to the Dixon cohesion theory, the water in the vessels forms an unbroken column from the roots up to the topmost leaves. The cohesive forces in this column of water resist breaking, so that when the osmotic gradient set up by transpiration exerts a pull on the top end of this column of water, the whole column moves upwards just as the oil dipstick of a motor car comes up when you pull the top end of it. Notice that we have now got rid of the idea of suction and the difficulty of the water barometer. The force that pulls the water up is an osmotic one, and it is transmitted down the stem by the cohesion between the water molecules.

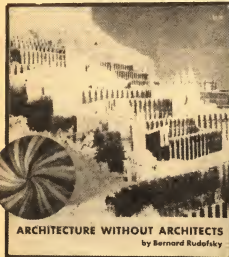


**Fig. 50.**  
The dodder (*Cuscuta europaea*)  
growing on willow

## Architecture Without Architects

**Troglydite caverns, 40 feet high treehouses, sculptured Iranian sail vaults; rare photos of man working in conjunction with nature. A book for architects and builders to meditate upon.**

—Lloyd Kahn



**ARCHITECTURE WITHOUT ARCHITECTS**  
by Bernard Rudofsky

**Architecture Without Architects**  
Bernard Rudofsky  
1964; 160 pp.

**\$4.50** postpaid

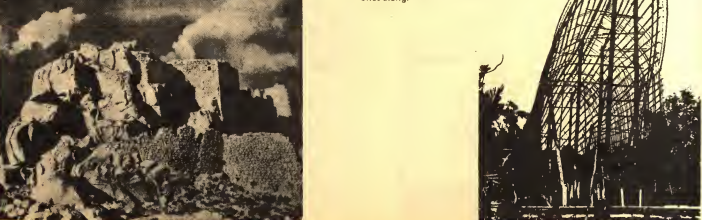
from:  
Doubleday & Company  
Garden City, N.Y. 11531

or **WHOLE EARTH CATALOG**



Cupola of a Turkish bathhouse—a whirlpool of bright stars, arrested, as it were, in its movement. The luminous disks embedded in the dome are thick, lenslike glass blocks. Iznic, Turkey. Ottoman period.

Many so-called primitive peoples deplore our habit of moving (with all our belongings) from one house, or apartment, to another. Moreover, the thought of having to live in rooms that have been inhabited by strangers seems to them as humiliating as buying second hand old clothes for one's wardrobe. When they move, they prefer to build new houses or to take their old ones along.



## Antoni Gaudi

If everybody's so inspired by Gaudi, like they say they are, how come there's no new buildings around that look like his?

God damn architects who bore and stifle and preen their chickenyard feathers. Give us more jungle birds like this one. If their buildings are inconvenient, good.

—SB

## Antoni Gaudi

James Johnson Sweeney, Joseph Lluis Sert  
1960, 1970, 192 pp.

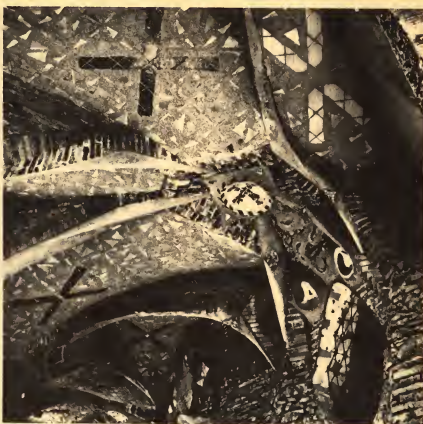
\$18.50 postpaid

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Praeger Publishers, Inc.  
111 Fourth Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



These benches are shaped to the human body. In addition their serpentine design facilitates the formation of conversational groups, for those watching children at play on the terrace. Gaudi's designs are not abstract and inhuman as they may sometimes appear. Human needs and their satisfaction are carefully considered. Perhaps it is due to his understanding of these needs, that Gaudi's work has always met with popular acceptance, while often being regarded as eccentric by the more sophisticated public.



Views of vaulting in the Gaudi Colony chapel. This type of construction recalls that used on the roof of the Mill House. The ribs are brick partitions that achieve structural efficiency without bulk. The construction of such vaulting requires expert craftsmanship, and careful direct supervision. There are scarcely any repetitive elements; but the application of the same directive principle and a use of warped shapes throughout make the work simpler.

## Writings and Buildings

I read this while I was in the Army, where our bugle calls came on scratchy records.  
Frank Lloyd Wright's reveille is still ringing.

—SB

## Writings and Buildings

Frank Lloyd Wright  
Edgar Kaufman, Ben Raeburn, eds.  
1960, 246 pp.

\$3.95 postpaid

from:  
World Publishing Company  
110 E. 59th St.  
New York, N.Y. 10002

or WHOLE EARTH CATALOG

So—the first thing to do was to get rid of the attic and, therefore, of the dormer and of the useless "heights" below it. And next, get rid of the unwholesome basement, entirely—yes, absolutely—in any house built on the prairie. Instead of lean, brick chimneys, bristling up from steep roofs to hint at "judgment" everywhere, I could see necessity for one only, a broad generous one, or at most, for two. These big fireplaces below, inside, became now a place for a real fire, justified the great size of this chimney outside. A real fireplace at that time was extraordinary. There were "mantels" instead. A mantel was a marble frame for a few coals, or a piece of wooden furniture with tiles stuck in it and a "grate," the whole set up against the wall. The "mantel" was an insult to comfort, but the integral fireplace became an important part of the building itself in the houses I was allowed to build out there on the prairie. It refreshed me to see the fire burning deep in the masonry of the house itself.

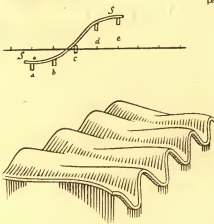
Simplicity in art, rightly understood, is a synthetic, positive quality, in which may be evidence of mind, breadth of scheme, wealth of detail, and withal a sense of completeness found in a tree or a flower. A work may have the delicacies of a rare orchid or the stanch fortitude of the oak, and still be simple. A thing to be simple needs only to be true to itself in organic sense.

Style is a free product but, still, a by-product: the result of the organic working in, and out of, a project entirely in character, altogether and in one state of feeling.

In Japanese architecture may be seen what a sensitive material let alone its own sake can do for human sensibilities, as beauty, for the human spirit.

Whether pole, beam, plank, board, stall, or rod, the Japanese architect got the forms and treatments of his architecture out of tree nature, wood use, and heightened the natural beauty of the material by cunning peculiar to himself.

The possibilities of the properties of wood came out richly as he rubbed into it the natural oil of the palm of his hand, ground out the soft parts of the grain to leave the hard fiber standing, an "erosion" like that of the plain where flowing water washes away the sand from the ribs of the stone.



To the young man in architecture, the word *radical* should be a beautiful word. Radical means "of the root" or "to the root"—begins at the beginning and the word stands up straight. Any architect should be radical by nature because it is not enough for him to begin where others have left off.

To acquire technique study the materials of which the product is made, study the purpose for which it is produced, study the manhood in it, the manhood of it. Keep all this present in your mind in all you do, because ideas with bad technique are abortions.

Beware of the architectural school except as the exponent of engineering.

Go into the field where you can see the machines and methods at work that make the modern buildings, or stay in construction direct and simple until you can work naturally into building design from the nature of construction.

Immediately begin to form the habit of thinking "why"

concerning any effects that please or displease you. Take nothing for granted as beautiful or ugly, but take every building to pieces, and challenge every feature. Learn to distinguish the curious from the beautiful.

Get the habit of analysis,—analysis will in time enable synthesis to become your habit of mind.

"Think in simples" as my old master used to say—meaning to reduce the whole to its parts in simplest terms, getting back to first principles. Do this in order to proceed from generals to particulars and never confuse or confound them or yourself be confounded by them.



"And that's why I'm concerned about you, my friend. I have the feeling that the answers to the great questions that are obviously troubling you are plain as the nose on your face, but you are just too ego-centered and self-involved at this point to realize that. I've got the feeling that the Word you are so in need of hearing is sounding in the atmosphere this very minute, but that you are too full of the state of your petty mind to hear. I think the first thing we ought to do by way of helping you to find some relief for your condition is to help you forget your name. I've forgotten mine. I don't have the slightest idea what my name is, and it's the most wonderful sense of liberation there is. It's like the rebirth that follows the spiritual death necessary to true illumination. One must suffer many deaths on the road to illumination, some actual, some only symbolic. Giving up your name is only a symbolic death, but for many people it is so painful it could well be likened to an actual death. What they fail to understand is that after death is the resurrection, the restoration to life that all the great spiritual leaders have experienced. This experience is available to every individual on one level or another, on planes both gross and subtle, if the individual is truly committed to his quest for the Ultimate Way. So what I need to know before we go any farther is exactly what your full name is. And your piece of birth, your astrological sign, your height, weight and rate of heartbeat. Since you are having trouble speaking, perhaps you could just write all of that down in this little notebook here, and then we can get started."

The Greek handed D.R. a worn notebook with the vin-yang symbol drawn on the front in blue ink, and the word "love" written about fifty times on the back. The book had about a hundred pages in it, and nearly all of them were full of writing, and drawings and weird little scribbles too obscure to make out thumbing through. The book excited D.R. tremendously. He wished there was some way he could ask to read it. But that was not the purpose now. D.R. flipped to near the end where the blank pages began, and with the Greek's ball point pen wrote down: "Divine Right (David Ray) Davenport. Finley County, Kentucky. Cancer. Five Feet, Ten inches tall. 158 pounds. I don't know my heartbeat."

"Well, a close estimate will do," said the Greek. And he took D.R.'s wrist in his hand, located his pulse, and began to count it as he watched the seconds tick off on his wrist watch.

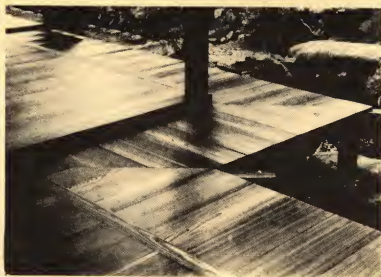


## The Japanese House

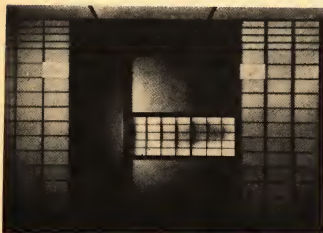
Without getting all sentimental and exotic we're still going to agree that Japanese make better houses than anybody else (they also have the fastest growing economy in the world, but that's another story — or is it?). If you're going to build your own house and don't mind some inspiration on the subject, this book was laboriously made for you. It's a great big Christmas present of a book full of yummy photos and diagrams and details of technique, all of which seems right within reach: I-can-do-it. Nice cure for nothing-can-be-done-because-it's-too-darned-big industrial blues.

[Suggested by Zen Mountain Center]

\$27.50 may choke you up, in which case get *Japanese Homes and Their Surroundings*, \$2.50 from Dover Publications—straight information on how to hand-make a lovable environment. —SB



SECLUSION IN BUILDING is an essential instrument for establishing, or preserving, the freedom of man. For, only in solitude can man escape from the coercion to which he is subjected when among the masses.



Shoji paper is the "glass" of the Japanese house. Its qualities, however, are of a different nature, and, thus, also are its effects. The light, broken already by the broad overhang of the eaves, is diffused by the paper and creates a characteristic light condition comparable to twilight. This situation does not change basically even if the evening or winter sun hits the paper directly. No glare, no shadows; a general gloom creates a soft, emotional atmosphere. With artificial light in use, the shoji paper shows its reflective-diffusing ability, and at night with lights turned out, might even offer an interesting shadow play the moon has staged with the old weather-worn pine tree. As time passes, the paper darkens. Here and there, a torn piece is carefully cut out and replaced by new, lighter paper. The paper pattern becomes, though irregular, more interesting and lively. The paper ages, as does man.

**The Japanese House—**  
A Tradition for  
Contemporary Architecture  
Heinrich Engel  
1964; 495 pp.  
\$27.50 postpaid

from:  
Charles E. Tuttle Co., Inc.  
Rutland, Vermont 05701  
or WHOLE EARTH CATALOG

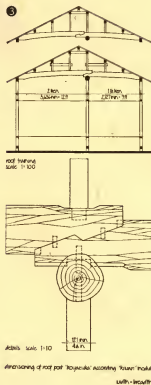


FIG. 107.—KITCHEN IN OLD FARMHOUSE AT KASHIYAMA.

## Japanese Homes & Their Surroundings

Edward S. Morse  
1886, 1961; 372 pp.

\$3.00 postpaid

from  
Dover Publications, Inc.  
180 Varick St.  
New York, N. Y. 10014

or WHOLE EARTH CATALOG

## Shelter and Society

Almost all the books you ever see on architecture are concerned with monumental building, a result of the relationship between architects and wealthy patrons. Seldom do you see anything on buildings by the people, of local materials and in simple harmony with the surrounding landscape.

Here's an exception. On the cover is what at first glance appears to be a primitive Portuguese fisherman's house. On closer inspection, it's a picture of one of Drop City's domes, colorful, funky, having sprung from the trash of "... a wasteful society."

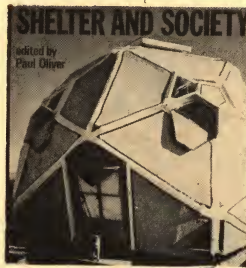
10 types of dwellings are covered, by different writers. A comparison of the pueblo and the hogan, the walled city of Old Delhi, the Norwegian Laftahaus, Villages on the Black Volta, and a fine article by Bill Voyd on funk architecture at Drop City. Many of the photographs are too dark, but you won't find them elsewhere.

It's more of a book on the functions of the buildings than on the external aesthetics.

—Lloyd Kahn

"All is as it should be," says one of the beings. "Nothing is complete," returns the other; "look at those creatures below this mountain, whom we see assembling, then disbanding, looking about, and betaking themselves to shelter."

From the Prologue to *The Habitations of Man in All Ages* by Viollet-le-Duc, translated by Benjamin Bucknall, Architect. 1876.



**Shelter and Society**  
Paul Oliver, ed.  
1969; 167 pp.

\$10.00 postpaid

from:  
Frederick A. Praeger, Publisher  
111 Fourth Avenue  
New York, N. Y. 10003

or WHOLE EARTH CATALOG

\$7.36 from Blackwell's (see p.2)

To the Egyptians, shelter for the dead was more important than shelter for the living; our factories, he argued, suggest that shelter for machines is better served today than that for men or gods. "Shelter seems, indeed, to have been a minor consideration in many of the early cultures."

For the very congruity and harmony which is so frequently a source of admiration and comment in architectural writings on vernacular shelter is evidence of the integration of the building in the life of the community as a whole.

The close link between dwelling and land expressed in the resemblance of the pueblo to a land-form seems to reflect the overall harmony of man and nature. The house is sacred, and so is the whole landscape and everything in it. Corn was more than a food, it was a symbol of life, and corn growing was regarded as a religious activity. Among the Tewa, for example, the greater part of religion centres around corn and, by extension, around agriculture in general. This attitude must influence the form of the pueblo and particularly its siting and relationship to the land; it helps to explain why the pueblo seems such an inevitable part of its surroundings.

Sun movements and solstices are extremely important, being related to ceremonial cycles. The pueblo is carefully orientated: it is related both to mountains ("Life comes from the mountains") and to the six cardinal points and the sacred directions of East and North.

[Suggested by Dave Evans]

**\$8.00** postpaid from:  
 Taplinger Publishing Co., Inc.  
 29 East Tenth Street  
 New York, N. Y. 10003

or **WHOLE EARTH CATALOG**

*(Suggested and reviewed by Charles Tilford)*

**Structural Design in Architecture** from:  
Mario Salvadori and Matthys Levy Prentice-Hall, Inc.  
1967; 457 pp. Englewood Cliffs, N. J. 07632

\$18.95 postpaid or WHOLE EARTH CATALOG

[Suggested by Jordan Belson.]

### The Elements Rage

**The Elements Rage**  
Frank W. Lene  
1965: 346 pp.

**\$7.50** postpaid

from:  
Chilton Books  
401 Walnut Street  
Philadelphia, Pa. 19106

or WHOLE EARTH CATALOG

Before Johnstown there were several small communities. The flood practically washed them out of existence, like a steamroller crushing toy villages. A stone viaduct was snipped in two as if made of dry clay, then ground to pieces. An iron bridge high in the valley was torn from its foundations by a blow from the edge of the flood. Dozens of locomotives and passenger carriages, hundreds of freight cars, and miles of track were swept toward the monstrous river pounded down the valley. All the added immeasurably to the battering effect of the water.

During a hurricane on Puerto Rico on September 13, 1928, a ten-foot pine board measuring three by one inches was shot through this Royal Palm tree.

A tornado, like thunder, is heard many miles away. As it approaches, there is a peculiar whistling sound that rapidly changes to an intense roar, reaching a deafening crescendo as it strikes. The screeching of the whirling winds is then so loud that the noises caused by the fall of wrecked buildings, the crashing of trees, and the destruction of other objects is seldom heard.

After each strike we moved in silence for a while, with only the tearing wind and slashing rain. Then the rocks would begin a shrill humming, each on a slightly different note. The humming grew louder and louder. You could feel a charge building up in your body. Our hair stood on end. The charge increased, and the humming swelled, until everything reached an unbearable climax. Then the lightning would strike again—with a crack like a gigantic rifle shot. The strike broke the tension. For a while we would grope forward in silence. Then the humming would begin again [quoted by Colin Fletcher].

The most serious health problem in offices is its sedentary nature. Compelled by lack of choice, we are forced to conduct most office activity in a sitting position. The result, as medical studies and insurance data make clear, is a steady decline in vitality, energy and general body tone.

Of even greater significance is the importance of sight as a window to mental recall. An office with no relevant visual display deprives the human performer of a spectacular recall tool: the human eye as a receptor for the mind.



Three sides with a slightly widened opening appears to be the best enclosure of all as a generality. There is good definition of territory or domae . . . privacy is well expressed and the ability to survey or participate is well maintained.

The management of symbolic representation of reality is the function of offices.

The office in its short evolution has adopted every kind of communication abstraction. Resultantly, we are concerned with reality simulation.

Face to face across a surface maintains formality and a tone of discretion. Ninety degree location, the most natural of all conversational positions, encourages exchange. Side by side positioning allows joint viewing of papers or objects intelligibly.



### ESTELLE'S COMPLAINT

As desperate as she was for someone to help her drive, and generally hassle the whole hummer of a scene on to St. Louis, Estelle wished she was by herself again. The girl Frieda seemed, actually. At least she was cool enough to simply settle into the front seat and keep whatever trip she was in on herself. But the Greek was not. What Frieda said did not bear to stay in hearing of his voice. What Frieda saw in the Greek Estelle could not begin to imagine, but whatever it was, she hoped she did not hear about it. Frieda was a sad, forlorn creature, and she needed some sort of help, but Estelle was not a child. She had been through too much of life. Maybe later, if things cooled a little, they could manage a little chat-chat, but for the time being the only thing Estelle could think about was getting as far away from the Greek as

At two o'clock on a hot afternoon in the middle of the desert she didn't have much appetite for walnuts. But if walnuts were what fate was serving up that day she guessed that was what she'd have. She reached into the Greek's leather food bag, got a handful of nuts, and eating them strolled off toward the dunes she'd walked on a while ago.

The thing that particularly bugged Estella was the way Divine

Right was zapping on the stupid Greek. There he'd been in a stupor for eight hours, sometimes huddling in her arms like a baby, and as soon as he comes out of it what does he do but fall in love with the first wise-man to come along and lay a heavy word trip on him. They were only a few minutes into it together, D.R. and the Greek. But Estelle had seen it happen so many times before she knew exactly what was coming down, and it was a drag. In her mind she saw the next five hundred miles unfolding in a stream of blather from the Greek while D.R. sat beside him dotting on his every word.

Oh D.R., Estelle thought. You're such a goddamn child.

[illegible]

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The creek photograph of a *torusado*, taken near Japen, Minnesota, on July 2, 1907.  
Lucille Handberg



## Architectural Design

This is the only architectural magazine we've seen that consistently carries substantial new information, as distinct from the stylistic eyewash characteristic of most architecture journals.

After a year of watching and using AD, it's clear that this is much more than an architectural magazine. It prints lots of news of American creative doings months before any U.S. publication. Its coverage of developments in cybernetics, structure systems, philosophy, use trends (e.g., communes), etc. is extraordinary.

—SB



Guad's Purgue Guad—'one of the most cybernetic structures in existence.'

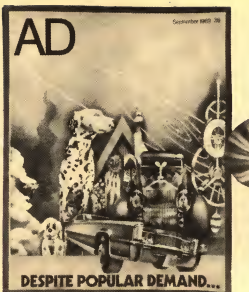
Peter Brookes/Dad

## Architectural Design

**\$13.50** postpaid for one year (monthly)

from:  
Architectural Design  
26 Bloomsbury Way  
London W.C. 1

I REPRESENT  
THE HIGH CAPITAL COST,  
LOW RUNNING/OPERATING  
COST SITUATION



DESPITE POPULAR DEMAND...

It is worth noting that the piezoelectric effect has been observed in a number of organic materials, among them wood, bone, tendon and skin and the argument has been put forward by Shamos and Lavine and others that the piezoelectric properties of these fibrous polymeric materials function as stress-sensing devices in living organisms and could account for the evolutionary and self-organizing structural characteristics of living things. In wood, stress concentrations due to wind loads would produce an electric potential proportional to the stress in any part of the tree, which might act as a growth signal, causing greatest growth in the parts that are stressed most.

As a combined sensor/effector device the possibilities are even more exciting. The most obvious and immediately valuable—if vaguely banal—proposition is that of producing a compression structure with infinite stiffness.

## This Graded Universe—Lancelot Law Whyte

You should have seen how he looked on his face when God solved the problem of making an endlessly varied universe. He had already made a man. The first was an ideal gas near to maximum dynamical disorder. That was dull; any differences he put into it soon vanished. It was an entropy victory, without order, form, or life.

Splendid...  
I have a divine  
idea.

His second was a world of perfect crystals. That was fun; there were 350 different types, all aesthetically intriguing. But each crystal was homogeneous, and therefore rather inert. It was a cold world (near zero), and left him dissatisfied. What he wanted was a blend of order and diversity, enough order to be pleasing and disorder, enough disorder to be endlessly varied. This subtle fluctuating balance he would call "life" by systems that display that vitality in a special mode to be called by them "thinking."

## Beyond Habitat

We've carried Buckminster Fuller, Paolo Soleri, and Christopher Alexander, so here's *Moshe Safdie's first book*. His first project, *Habitat*, was a major attraction at Expo '67 in Montreal and established him as a boy wonder in a field that usually requires decades of tooth tugging to succeed. The book is interesting for his ideas of high-rise village life, but even more valuable to the building genius is his account of the political and economic pressures that shape a project and squash the designer and betray that original sweet idea.

(For an even more revealing perspective on Big Project success, try *Albert Spear's* Inside the Third Reich. *Spear*, at 29, was Hitler's architect. I used to think *The Fuhrer* was a frustrated architect. Turns out he was a successful one.)  
*Safdie's* Student Union for San Francisco State College was initiated, guided, and funded by the students. The building was stopped by asshole trustees.

—SB

Looking back I find it incredible that fifteen thousand students who were prepared to pay for their own building, and who had support from the president, the faculty senate, the advisory committee, and some of the most respected members of the architectural profession in San Francisco, could be frustrated by sixteen trustees who met once a month to run eighteen colleges. And that in a state where Reagan was elected on a platform of "conservation," which we are told supports decentralization and community control of community functions. This was a project that surged on the constructive energies of students over a period of five years—a campus effort to get a building built with their own money. If the building had gone ahead at that point, it would have involved the whole campus, had everyone working together creatively. We were going to buy looms and all the textiles in the building were to be woven by the students. Students were going to become involved in planting the building in collaboration with the department of botany. Students were going to make the furniture, and make the graphics, all kinds of things. So what do the trustees do? They say "No." And then they're surprised when the campus blows up.

## Sweet's Files

It's a shame some of the best tools are the hardest to get to. Though *Sweet's* are free, they are given only to Public Libraries in cities of more than 250,000 people and to the 10,000 most active architectural firms in the U.S. It's often possible to talk a local architect out of last year's edition if you speak for a city. They do not become obsolete just because they are a year or two old.

*Sweet's* is essentially a catalog of catalogs, a filing system in a yard of volumes which binds, lists and cross-references catalogs of manufacturers. It covers six areas that I know of: Industrial, Residential and Commercial Construction and Product, Interior and Plant Design. Each file in these areas is a separate entity. The commercial construction file is the one most architects have and for any one building, it is the most useful. It is very helpful when for any one building, it provides a full spectrum of what is already available for the ready-made answers to most problems. Manufacturers usually do a pretty good job with the material they include in the files so there's not much left to question as to how their product works. If there is any question, the manufacturer's representative is usually listed, with his phone number and address. He'll usually bend over backwards to help you if you say you saw it in *Sweet's*.

[Suggested and reviewed by QNYX]

Sweet's Files  
Sweet's Construction Division  
McGraw-Hill Information Systems Company  
330 West 42nd Street  
New York, N.Y. 10036



Habitat, and crane that lifted the east modules into place.



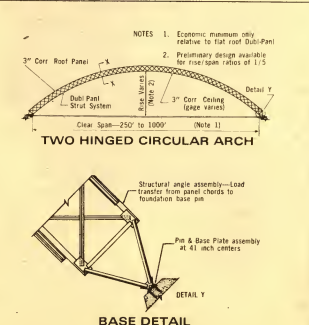
Beyond Habitat  
Moshe Safdie  
\$170.00  
244 pp.

from:  
MIT Press  
50 Ames Street  
Cambridge, Mass. 02142  
or WHOLE EARTH  
CATALOG

This was another moment when Habitat sat poised between life and death. At that point Churchill could have backed down before Lapointe's pressure. He could have said, "It's your property, you paid towards making it, and you have some rights to it..."

or "What do you think we should do with it?" Instead, he turned round and asked, "Are you prepared to build it? Are you prepared to finance the whole project?" LaPointe said, "No," Churchill said, "When you give money to the government you give it without any strings attached. The government owns what it is done with the money you have donated. This is our plan. The Corporation owns it."

That was when I realized how strong Churchill really was. He had dealt with the private sector as a government official; there had often been attempts to push him around before, but he wasn't taking it. Right there he saw the project from drifting into the potential problems of the cement capitalists' uninvolved involvement.



BASE DETAIL

## Architectural Graphic Standards

If *Sweet's* is a kind of magic lamp in many architects' and builders' libraries, the genius might well be "Graphic Standards." This volume has been around for years; its latest edition is its fifth. Whenever the office expert hasn't got the answer, "Graphic Standards" usually does. It is the how-to-do-it book of construction. It doesn't cover domes but if there's anything else you have in mind, it's probably in there. Older construction techniques (interior masonry, etc.) are covered as well as relatively newer techniques; it's very useful in remodeling and repair work. Everything is done with a minimum of verbiage and a maximum of illustrations and very useful charts and graphs. "Graphic Standards" is so taken for granted by any architecture student or office that it's almost become a challenge to stay away from it; ultimately, however, there's seldom a building built without reference to it in the U.S. today, TOO.

[Suggested and reviewed by QNYX]

Architectural Graphic  
Standards for Architects,  
Engineers, Decorators,  
Builders, Draftsmen  
and Students  
Charles G. Ramsey and  
Harold R. Sleeper  
1932 - 1956, 757 pp.

**\$39.50** postpaid

from:  
John Wiley and Sons  
Publishing Co.  
1 Wiley Drive  
Somerset, N.J. 08873

Western Distribution:  
1530 South Redwood Rd.  
Salt Lake City, Utah 84104  
or WHOLE EARTH CATALOG





## The Technique of Stained Glass

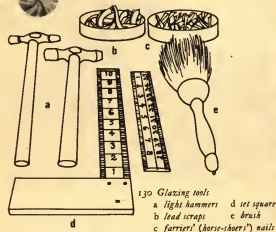
Alright, you dome builders, now that you've got the sunlight working for you, how about getting it to play for you? There's livelier routes to color than car tops. Stained glass technique, ancient and modern, is here in depth. List of suppliers given. —SB  
[Suggested by Stephen B. Siegal]



**The Technique of Stained Glass**  
Patrick Reynolds  
1967, 192 pp  
\$15.00 postpaid

from:  
Watson-Guptill Publications  
165 West 46th Street  
New York, N.Y. 10036

or WHOLE EARTH CATALOG



## Stained Glass Lorc

I would like to help you people include another playing material in your Whole Earth Catalog. Stained glass.

The two best places to buy stained glass are

Leo Popper  
143 Franklin St.  
New York, N.Y. 10013

and

S.A. Bendheim Co., Inc.  
122 Hudson  
New York, N.Y. 10013

which are just around the block from each other.

Popper's is going out of business, however—anyone want to run a stained glass import business?

Almost all the other stained glass shops buy their glass from these two or someone who did so avoid the mark-up.

If you can't visit Bendheim's and spend hours looking at thousands of varieties of glass, it's best to know something about glass varieties. There is no good book about the best and the best way to learn is by pilgrimage.

There are four basic types:

1. imported antique style
2. domestic rolled pattern
3. opalescent
4. dallas

The first three are thin sheet glass for leading and the last is thick slab glass for cementing into walls. The antique is hand blown and is usually in bright colors that have a life about them. They are the most expensive sheet glass. German selenium reds and oranges are especially fiery. The French glass usually comes finished—a thin layer of a second color. Then there is really (bumpy) and streaky (the color is streaked like marble cake). Best glass for fine art windows.

Domestic rolled glass has colors less vibrant. In quantity, it doesn't take more than plate glass. Some patterns are double rolled cathedral—covered with small bumps. Steely—filled with air bubbles. Flemish—large scrolls like an apple piercer. And a flower pattern, etc. Best glass for art windows.

Opalescent glass is the Victorian style that looks like someone mixed milk in it or painted heavy enamel on it. It is best suited for Tiffany lamp shades since it distributes the light, especially if the inside of the shade is finished opal.

The dallas glass is about 8" x 10" x 1". It is generally broken up according to a pattern, laid on a table where epoxy is poured around the pieces. When dry, a stained glass wall is obtained. It is the most expensive. The slab is at least \$4. But can be the most impressive.

So now you are ready to order glass like:

light brown 2 sq. ft. Flemish domestic  
bright red 3 sq. ft. German selenium antique

Note: OK to cut in 1 ft sq. pieces for shipping.

Enclose about \$2.00 per sq. ft.

Leading is best obtained from White Metal Rolling & Stamping Corp., 80 Moultrie St., Brooklyn, N.Y., except minimum order is around \$75.00

The best glass available, still not adequate, is Techniques of Stained Glass by Patrick Reynolds—a \$15 book from England. Another English book in paperback is Stained Glass by Laurence Lee, Oxford U at \$1.26.

Patric Grant  
Kington, N.Y.

90 Stained Glass  
Steller

## Whitmore Durgin Glass Company

stained glass supplies,  
everything you need  
to change your view of the neighbors  
into a flyvle lead splendor.  
I met a fellow on a train,  
once,  
who paid for his bundom,  
by packing around two suitcases  
full of glassworkers tools,  
fading lead windows,  
here and there.



—jd

[Suggested by Renee Gallery & Randy Street]

## Catalog

\$2.55

from:  
Whitmore Durgin Glass Company  
Box 2068  
Hanover, Massachusetts 02339



Besides lead came and the usual type of cathedral glass most people would associate with such work (including even—shudder!—"kilo" for beginners), Whitmore Durgin—for reasons known only to themselves—carry such goodies as World War II Meat Rationing Tokens, antique dog license tags from Bedford, Pennsylvania, old buttons, stop light lenses, and seemingly endless quantities of beads and antique happenings! (They even operate a happen approval service.)

Even if you hate stained glass (though I can't imagine why anyone would bother hating it), whose day would not be brightened by the news that he can obtain

QUIZZICAL YELLOW FISH EYES ON WIRE—As a result of a bad trip (to our attic) we have become almost sole owner of all these glass fish eyes. We can only describe these particular eyes as being mildly interested, but not exactly cordial. It would be of considerable benefit to our general mental outlook if this silent majority (observing us from every angle) could be reduced somewhat. That's where you come in. They were made in the early 20's for use in fish fairs. The wire can be cut easily, leaving a stub for pressing into soft material such as wood, cork, or rubber. You can certainly think of many devilish uses for these fine specimens. They would make interesting acrylic sticks, but the wire tastes like Post Office ink. 3/16" to 1/4" diameter. 25¢ each. 10 for \$2.00 postpaid.

Gary Craig  
Columbia, Missouri



#801 SCHARLONNENSCHEIN (double bladed stencil [hears]) Available 1970—only 1 set, 1970. Be a Scharlonscheneinmeister! This scissors cuts out paper stencils and eliminates 1.75 m.m. of paper between the blades to allow for perfect sliding. You can certainly think of many devilish uses for these fine specimens. They would make interesting acrylic sticks, but the wire tastes like Post Office ink. 3/16" to 1/4" diameter. 25¢ each. 10 for \$2.00 postpaid.

#889 SHEET LEAD For silhouettes and other intricate exercises. A pure lead which will readily solder to brass. Usually for work on lempshades, etc. Usually painted black. 12" wide sheets only, sold per running foot, up to 6 feet long. \$3.00 per running foot. Add for postage at the rate of 4¢ lb. per running foot.

#890 LEAD WIRE 1/8" diameter pure lead wire for various decorative effects on stained glass ornaments. 5 foot length, 75¢ postpaid.

## Stained Glass for the Amateur

T. Y. Crowell is publishing Stained Glass for the Amateur by Jean Jacques Duval this Fall (1971) for about \$9. Duval also runs a stained glass workshop at 88 West 15th St., New York, N.Y. 10011.

Thomas Y. Crowell Company  
201 Park Ave. So.  
New York, N.Y. 10003



dear whole earth,

June 1, 1970

Enclosed is a map of my just about completed house. I am in great need of a whole lot of love, could you please ask your readers to keep on the look out for some winter is almost here and ingesting a draft from the elf. Thanks, madonny.



## Trailer Life

First, let me thank you for the Catalog, I and my friend my dog & cat are excited to be a carnival in every angle and your catalog is like a bigwam letter from the whole counter-culture. My reason for writing is to share with you something of our life style that might help others.

All the families on the show have house trailers and each week we set up our little village in a different land sometimes a little hostile place. Like fairground, behind gas stations, ball parks. For this one needs a truck to pull trailer (or heavy car), lots of hooks and electric cords, "Y's" (an object shaped like a Y) used to connect untold numbers of trailers to the same water supply), a shovel to dig a hole if you don't have a self-contained bathroom.

We have a 27 foot 1957 trailer that has been our year-round home for over a year and it's just like an apartment but better. It needed a paint job so we all got stoned and did it pink, yellow, and orange. And I've got the outdoors all around.

It cost \$900 and the only money that we had to spend was for travel, i.e. \$200, then \$100. The rest has gone for rugs, sound systems, posters orange light bulbs and lots of contact. But it's home and it's beautiful. The new trailers are more expensive (\$3,000 to \$4,000 for one our size) and very sterile.

I don't know about California but the Mid West is full of old trailers like so is Florida. The old folks in the retirement parks trade in some. The only drawback is our neighbors. Carnival people are a sub-culture but not ours. Trailer parks are full of nice middle class folks. But if a group of friendly freaks decided to get back to nature, I think a trailer is easier for the city folks in building a log cabin.

Susan Sullivan  
Flushing, N.Y.

## Dome Cookbook

A new art form is evolving in the southwest desert. Multi-colored garden domes put together with whatever's lying around. Free heat from the sun. Behind much of the innovating stands Steve Baer, a local inventor who generates enough energy to get others moving too.

This tabloid confirms the crystallographic theory and junky practice behind Baer's domes: from hexagons to a polyhedron without reflecting connector angles to how to chop the top out of a car without losing your head. From all we can determine, Baer's domes are in architecture. So is his practice. Instead of dying of disorientation dry, his notions stand around in the world bugging the citizens.

The Dome Cookbook, now in its third printing, is published by Lama Foundation, an experimental community in New Mexico.

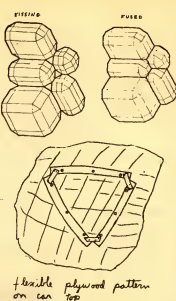
—SB

Dome Cookbook  
Steve Baer  
1986; 40 pp.

Lama Foundation Fund  
P.O. Box 422  
Corrales, N.M. 87048



When you are putting up a dome panel by panel you often have to use poles to support the wobbly sides as they close in toward the center. When we were putting up the second to last panel in the shop dome we had three poles in strategic spots to hold the wobbly overhanging panels from collapsing. The poles were nailed at the top so they wouldn't fall away if during a moment's strain the load were lifted up and off of them. The panel was 8' by 19' and extremely heavy. We put it up with an inadequate crew, two men and two women. We struggled for an entire afternoon the last few inches Albert Mahler pushed from on top of a spool resting on top of the cab of his pickup which we had driven into the dome. It was tough and go, a clamp might slip, Albert might collapse, the poles might buckle. Each one of many failures seemed equally as probable as getting the monster joined to the neighboring panels. A huge shove, some quick work with the crow bar and clamps—Albert eased off and it still held, I took a few more turns on one clamp and added another one—it was a sure thing, we had it in place! I felt as if the panel had been lifted into place by some incredible wave we had created that now washed back as we put down tools and Albert got down off the cab. But there was one last thing to check—the poles, were they dangerously bowed under this new load. The entire sensation in my head began for a moment to turn inside out when Holly yelled "look at them" but then I saw what it was—the dome was finding its shape. It had lifted all three heavy poles off the floor, they were hanging from where they had been toe nailed at their tops, swaying slowly. Three important pillars transformed in one moment into three dangling slow swinging pendulums.



**Solar-heated rhombic-dodecahedron**  
for Steve Baer

a man  
is blessed  
who assists  
in the building  
of a solar-heated  
rhombic-dodecahedron.  
I don't mean  
to say technology  
itself is holy  
(like that too  
may be an  
element)  
I mean  
heat rises.  
Rocks preserve heat.  
Asymmetrical dwellings  
can stand by themselves  
if properly  
arranged.  
No.  
I mean the shovel  
in my hands.  
I mean  
the cottonwoods  
by the river.  
I mean the dark  
scent of dust  
nudged up  
by a few  
drops of rain.  
Damn it!  
What I mean is the cloudburst  
(which drenches us  
and makes us huddle together  
in the cold  
pickup our  
only shelter.)

Sydney Goldfarb  
Speech, for Instance  
Nonsensy Press, 1969

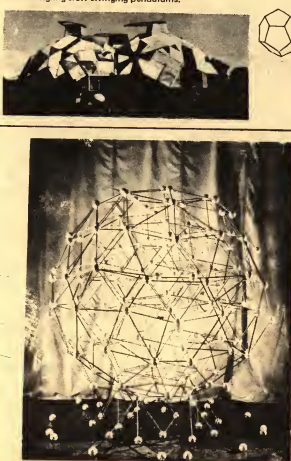
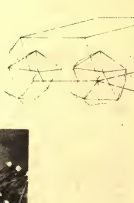
## Zome Primer

Gone beyond Dome Cookbook, Baer's investigation of further uses of five-fold symmetry leads toward a kind of universal truss, infinitely flexible in shape and dimension, but finite and handy in connecting hardware. The book is technical. With it and one of Baer's models you can take some surprising trips through the labyrinth of structure where just often enough you meet yourself coming back, elegantly.

—SB

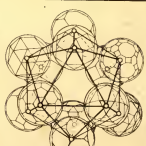
Zome Primer  
Steve Baer  
1970; 35 pp.  
\$3.00 postpaid

P.O.  
Zomeworks Corp.  
P.O. Box 712  
Albuquerque, New Mexico 87103  
or WHOLE EARTH CATALOG



## RHOMBIC ENNEACAONTAHEDRON

The geodesic dome, if it is large and composed of many different edges and joints, has many different edge lengths. It is complicated in structure and simple in shape. Zomes are simple in structure and complicated in shape.



THE GENERATION OF THE BASIC POLYGONS  
Pattern of unfolding in degrees of order in space

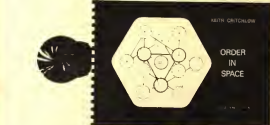
## Truss turning corner 8 A cells - 4 B cells

## Order in Space

A new book by an experimental mathematician on order in space. "... space defining, distribution patterns, space filling problems, packing & stacking, economy grids and communication linkages."

There are exciting insights into structure in nature, and exploratory diagrams of the functions possible in space.

—Lloyd Kahn



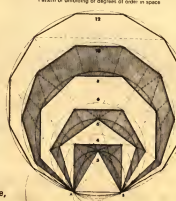
Order in Space  
Keith Critchlow  
1969; 120 pp.  
\$7.50 postpaid

from:  
The Viking Press  
625 Madison Avenue  
New York, N.Y. 10022

or WHOLE EARTH CATALOG

\$5.04 from Blackwell's (see p. 2)

Right: The triangle is the prime polygon and only structural shape, followed by the square, pentagon, hexagon, octagon, decagon and dodecagon. The broken lines indicate relationships of concord between the polygons.



## FAMILY REUNION

When Estelle saw the girl go up to the family at the picnic table she figured something weird was going on. And when the girl got to the car and drove away with them Estelle decided she'd better go back to the rest area and find out what was wrong. D.R. was sitting on the picnic table, gurgling and grinning with his eyes closed. The Greek was peering into D.R.'s open mouth like a dentist, trying to see why he couldn't say "OM". Estelle came up behind the Greek and watched him operate for a minute or two. Then she walked around so he could see her and ask him if he had seen Frieda leave. "Just a minute," said the Greek. He probed D.R.'s throat with his finger till he gagged. "Now try it," said the Greek. "Just sort of hum it, go OMOMMMOMMMOMMM." As D.R. swallowed and warmed up for the try the Greek looked up at Estelle and said "Yeah, I saw her. Looks like she's headed west again." But didn't she say anything? asked Estelle. Do you know why she left?

The Greek shrugged. "Everybody splits sooner or later," he said. "This was just her time, I guess." "Awwwww," D.R. intoned. "Awwwwwrrrrrr." "Mellow," said the Greek, stroking D.R.'s throat. "Make it mellow. It's a prayer, not some sort of challenge." The Greek turned toward D.R. again, but Estelle leaned and stayed in front of him. "But how do you feel about her going," he said. "Don't you care? I mean, doesn't it make any difference..."

"I'm very happy for her is all," said the Greek. "It was time she went. I'm pleased she was clear enough to recognize it." "She didn't seem very clear to me."

"And what is that supposed to mean?" asked the Greek. "Nothing. I just feel a little more concerned than you seem to. She seemed very fragile to me."

The Greek laughed. "I'm sure she did." "And what is that supposed to mean?"

"Well, it's obvious, isn't it? You see Frieda as this helpless little creature who couldn't possibly get going on her own. And I'm sure you think you might have been able to do something for her if she'd stayed around."

"That's bullsh\*t." "Of course it is. It's all bullsh\*t." "No it isn't," said Estelle. "It's not all bullsh\*t."

"And I would agree with that, too. It's not all bullsh\*t." "Jesus," said Estelle. "You are really full of shit, did you know that?"

The Greek smiled. His white teeth were as big as thumbnails. His blonde hair glinted in the sun. "Of course I know it. Do you realize that you are full of bullsh\*t too?"

"Yep yep yep," said Estelle. "That's all you do." "Awwwrrrrrr," D.R. gurgled. "Awwwrrrrrr." "Bellow," the Greek said to D.R. "Make it mellow. Make it mellow. Make it a prayer."

But "awwwrrrrrrrr" was the best D.R. could do. "Poor old D.R. Do you realize he can't make a single vowel sound?" "I've seen him in worse shape," said Estelle. "You're a bitch, aren't you?" said the Greek. "You're a son of a bitch," Estelle hissed. "A goddamn phony supurguru son of a bitch."

"Right on," laughed the Greek. "God, is that ever right. You're a bitch, and I'm a son of a bitch. Hello, Mother. Welcome to the family reunion."



## Geodesics

This is the first book wholly devoted to geodesics. Good text, clear drawings, introductory text on the basic principles of Fuller's geodesic domes.

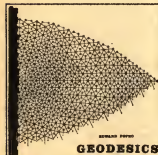
Shown are domes of wood, metal and plastic, most of them produced industrially; along with the various domes are detailed sections of hubs, construction methods, and assembly sequences.

The brief text discusses

- polyhedra
- orientation
- breakdown
- frequency
- base truncation
- chord factors (the constants necessary for calculation of different diameter domes).

—Lloyd Kahn

[Suggested by Onyx]

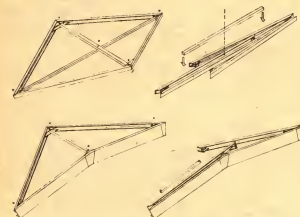


**Geodesics**  
Edward Popko  
1968; 124 pp.

**\$4.00** postpaid

from:  
University of Detroit Press  
4001 West McNichols Road  
Detroit, Michigan 48221

or WHOLE EARTH CATALOG



Diamond packaging sequence, an ingenious pin and hinge system allows diamond components to partially disassemble reducing packing volume, typical diamond and base support shown. A Fuller Research Foundation Project.

## O'Dome

The O'Dome is a lightweight circular structure that can be transported in a station wagon and erected in three hours. Even though the manufacturer seems to be aiming it at Playboy readers for beach cabanas—"instant vacation house"—it looks like a low cost highly portable, well designed unit that could easily be trucked into the woods for quick shelter.

It is of stress panel design (the bend-over sections are the framework as well as the membrane), and modular, meaning you can connect one to another. Tension rings top and bottom hold the panels together.

Different color panels, different sizes, options as to amount of glass.

I assume it's waterproof.

—Lloyd Kahn

15' diameter \$1208  
20' diameter \$2260  
25' diameter \$2890-3500, depending on amount of glass  
from:  
Tension Structures, Inc.  
419 East Main Street  
Milan, Mich. 48160



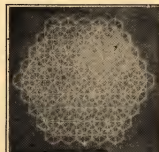
## Space Grid Structures

A space grid is a means of spanning great distances with little weight, and a few immediate supports. Buckminster Fuller's Octetrus at the Museum of Modern Art in 1959 was 35' wide and spanned 60' one way, 40' another from one column of supports. It was fabricated of 2" pipe.

Space grids consist of two parallel planes, forming a floor and ceiling; "web" members in between connect them in such a way that external loads are distributed in all directions.

This book is "... an exchange of information about what has been done recently in the development of flat space grid structures." There are photos, drawings, models of structures and joints. The three sections of the book deal with flat double-layer space grid structures, stressed skin space grids, and fine clear drawings of space grid geometries. Also an extensive bibliography. Very little text; it's not needed as the drawings and photos are excellent.

—Lloyd Kahn

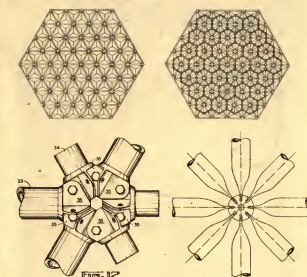


**Space Grid Structures**  
John Borres  
1968; 200 pp.

**\$12.50** postpaid

from:  
The M. I. T. Press  
Room 785  
50 Anna Street  
Cambridge, Massachusetts 02142

or WHOLE EARTH CATALOG



## Dyna Domes

There are about a dozen Dyna Domes on the outskirts of Phoenix. Each new one built gets a little closer to the city limits, and it's the hope of domebuilder Bill Woods to have the city fathers wake up one morning, find themselves surrounded by domes, and admit the new creatures under the wings of the building codes.

These are good quality, low cost plywood domes, with fiberglass exterior, and polyurethane foam insulation sprayed on the inside. Wood struts are put together with patented metal connectors, seams are filled with high-strength caulk, then taped with fiberglass.

You have the choice of having a dome erected (within 500 miles of Phoenix), buying a kit, or purchasing just the connectors with panels. Woods has been experimenting for some time with foam-fiberglass buildings, has built a machine that produces the sandwich panels, and is about to market a foam dome.

—Lloyd Kahn

Brochure free from:  
Dyna Dome  
22226 North 23rd Avenue  
Phoenix, Arizona 85027

Complete dome, erected on concrete floor within 500 miles of Phoenix: approx. \$4.00 per sq. ft. floor space.

Complete kit with instructions for erection: approx. \$2.00 per sq. ft. floor space.

Hub connectors, with plans for building it yourself: \$2.00 per strut.

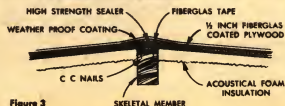


Figure 3

## Space Enclosure Systems

subtitled "identification and documentation of cell geometries", wood's book presents both tabulated and graphic analysis of twenty-three volumetric geometrical forms, or, as he more effectively describes them, "space enclosure systems". The result is a beautiful, clear cut little TOOL that can liberate the designer, architect, educator, sculptor, mathematician, and ambitious spirit. wood has taken this presentation just far enough, his information is formal, clear, simple, good and useful, what stimulates appreciation for what he has presented is what he has omitted. The book is void of the cliché "author's sketches" of possible futuristic applications that too often infringe or undermine the user's imaginative potential. wood allows the application of his data to be the reader/user's choice and opportunity.

[Reviewed by thomas casey]

Wood has written a second volume (OSU No. 205) subtitled "The variables of packing cell design", which does the same thing with a whole new set of solids.



**Space Enclosure Systems (No. 203)**  
Donald G. Wood  
1968; 52 pp.

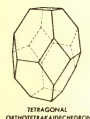
**\$3.50** postpaid

**Space Enclosure Systems (No. 205)**  
Donald G. Wood  
1968; 59 pp.

**\$3.50** postpaid

both from:  
University Publications Sales Office  
Ohio State University  
Columbus, Ohio 43210

or WHOLE EARTH CATALOG



TETRAGONAL  
ORTHOTETRAHEDRON



CUBE



HEXAGONAL  
PRISM



RHOMBICUBOCTAHEDRON

RHOMBICUBOCTAHEDRON

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## Future

Finland, famed for its forests, and finely-crafted wooden structures, has produced the first well-detailed, commercially available foam fiberglass dwelling.

Now being manufactured in the U.S., the Future—a shiny elliptical pod—looks like it just landed. It can be dropped in by helicopter (expensive though) and requires no site preparation. It's structurally strong, well insulated, and has retractable stairs. Interior looks plastic and shiny and badly needs some madras bed-spreads and non-plastic human touch.

—Lloyd Kahn

## Future House

**\$10,000** for shell  
**\$14,000** for completely equipped house  
F. O. B. Philadelphia

from:  
Future Corporation  
1900 Rittenhouse Square  
Philadelphia, PA 19103



## Domebook Two

This is an instruction manual for builders and a story book of some new communities in America. It is the beginning of an information net of people making their own shelters.

It contains instructions—as detailed as we could pull together—on a dozen different types of domes, each with much variation possible. Everything worthwhile from Domebook One is included, there are details on domes we've built since then, and there is feedback from people who built domes from Domebook One.

There are visual and mathematical sections on geodesics, a very complete chord factor section, elliptical geodesics, instructions on models, a section on trace-over paper models and take-off points for various trigs.

The building information is better than Domebook One—corrected, modified, clarified. There is now good information on seating, floors, windows and other construction details. There are fairly complete instructions on foam and aluminum domes we have built, a five page section on domes at the Ananda community in Grass Valley, a description of a ferro cement dome on a wood frame in Iowa, a beautiful shako dome on a lake in Washington. There are cautionary words on shiny plastics as building materials—don't be afraid to use them, but be aware of all qualities of the particular plastic and where it comes from before you decide to use it. There is emphasis on building with trash ("our only growing resource used materials, whatever is lying around. Funk building, the architecture of necessity).

This book is not so much specifically about domes as it is a call to get you moving, to take things in your own hands, to act. Most important to us in this process is to communicate as we learn, and in the future we'll act as a funnel of incoming shelter information. We plan another book by 1973, probably to be called Shelter, and we may put out supplementary data in between now and then. If you want to us to let you know what we do next with shelter, film, video, publications—send us a postcard with your name and address.

[Reviewed by Lloyd Kahn]

Domebook Two  
1971; 128 pp.

\$4.20 postpaid

from: Random House  
General Delivery  
Boling, CA 94924

or WHOLE EARTH CATALOG



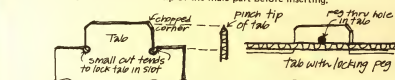
### Windows and Doors

2 X 4's are used to frame the windows and the doors. The door is made by "dropping" perpendiculars to a base frame. The door can be made to swing either in or out.



A very pleasing window pattern is with three windows in a row. The center window can be made to open and close. We made this window smaller by running the 2 X 4 frame parallel to the struts and hinging it at the top.

Cardboard can be fastened with tabs. They should be as large as you can manage. The slots should be a jam fit. Pinch the tip of the male part before inserting.



We decided on a long arc of window area to follow the sun. 2 doors (full triangles) and full triangle windows at the bottoms of 3 of the pentagons. Right now the windows are covered with 1/2 mil vinyl. Send us glass!



## DESIGNING THE FERRO ARMATURE

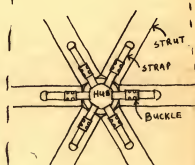
### A. Geodesic Frames

From the foregoing we see that a ferro cement dome can be structured as a self-supporting spherical shell, without formwork. However perhaps the simplest and safest way to describe the domical enclosure is by a geodesic net of wood or metal struts which support the mesh that gets ferro cemented.



Regardless of the size of the dome, a higher frequency geodesic net will result in a more nearly "spherical" shell, and a lower frequency will give a more "faceted" polyhedron. Although little experimental experience is available, it doesn't seem to matter critically to the ferro cement how spherical it is.

If the mesh is abundant and continuous, and if the application technique is sound, then the ferro cement skin will transfer stresses across the dihedral angles of the triangular planes without cracking. (The skin may tend to sag between the struts when loaded with wet cement, giving a tentlike effect.) Therefore, it might be just as good and a lot more convenient to use a low frequency frame of fewer and larger struts, as did the Jensens.



No plans were ever drawn for our domes, only a few sketches. Our blueprints have been mathematics. As you read the rest of the book, it may be helpful for you to know of the following general categories of dome construction:

**Sun Domes.** The Sun Dome was a swimming pool cover dome published by Fuller through *Popular Science* in 1966. For some time, this was the only geodesic geometry available to anyone wanting to build a dome. The Sun Dome is made of triangles on frames that bolt together to make the dome. Some examples are Sun Dome, p. 14; Big Sun Dome, p. 16; Aluminum Sun Dome, p. 29; and Portable Pillow Dome, p. 44.

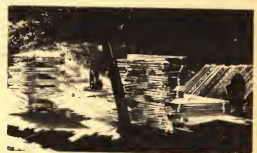
**Struts/skin domes.** First the framework is put up, usually with various vertex connectors, then the skin applied. See Pacific Dome, p. 20.

**Flanged panel dome.** Skin and struts are one-piece, with skin flanged over to form strut. Assembly is like the Sun Dome, usually with bolts, or rivets. Example: Aluminum Tricon Dome, p. 26.

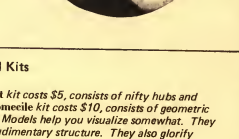
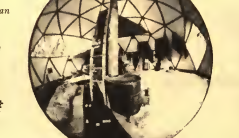
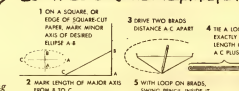
**Monolithic skin domes.** Dome skin is applied in liquid form, hardens to make a one-piece rigid skin. See Egg Domes, p. 35; Muslim Foam Dome, p. 40; Ferro Cement Dome, p. 66.

**Tent Domes.** A one-piece skin is either hung from, or draped over a frame. See Tent Domes, p. 48.

The first section of the book was mathematics. What follows are our building and living experiences, and communication from other builders throughout the U.S. and Canada.



## HOW TO DRAW A PLAN



### THE KEY

Estelle was so furious she went to the bus intending to just get in and drive away and leave D.R. and the Greek to their stupid plans. Leave leave leave was all she could think about. Go. Go. Go. Some old story. Some old broken record. Some old thorny plot on the never-ending cycle.

She was crying now. That seemed like a broken record too. God, she thought. Do I ever cry a lot. Am I ever one whiny tearful bitch.

Cry. Cry. Cry. Go. Go. Go.

But Estelle couldn't go because the Greek had taken the key. "You son of a bitch, give me that goddamn key."

She was about fifty yards from the Greek, and the wind was still blowing.

"What?" called the Greek. "I can't hear you."

Estelle ran a few yards toward the table. "I said you've got the goddamn key!"

The Greek grinned and nodded his head vigorously. "I know it," he called back. "I've always had the key."

"You silly bastard!" Estelle screamed. She glanced around the ground for a weapon of some kind to kill him with. But her eyes were too full of tears to see. She blinked out for a moment then. The whole world went black as night and Estelle forgot everything she knew. When she came to again she was in the bus with the pill box in her hand, looking for a driver.

## Dome Model Kits

The Dome East kit costs \$5, consists of nifty hubs and struts. The Dome West kit costs \$10, consists of geometric plastic panels. Models help you visualize somewhat. They may help on rudimentary structure. They also glorify trivial problems and obscure serious ones. Buildings built too scrupulously from models tend to look like models. Build buildings first, then models.

Dome East  
Wendell Enterprises  
Box 922  
Hicksville, N.Y. 11802

Dome West Kit Co.  
Box 954  
Mendocino, CA. 95460



## The Owner-Built Home

Ken Kern makes a unique offer to anyone thinking about building his own home. For \$10 he furnishes a preliminary house design, as well as a copy of *The Owner-Built Home*, which is about the most useful book on building available.

For the design, send him a sketch of your building site, along with space requirements and personal likes and dislikes; or you may prefer to get the book first and read the first chapter on "Site and Climate" before sending in the information.

The book is sound advice on the best low-cost building techniques from around the world: Africa, India, Israel; countries that cannot afford U.S.-style waste. Much of it is not in print elsewhere.

A 1" concrete floor with loading stresses of 450 lbs per sq ft; houses built of earth, woven bamboo and bottles, as well as of conventional materials. How to hook up your plumbing in a simple central core.

Good notes on concrete proportions, additives such as sawdust or emulsified asphalt for "comfort cushion" floor. Details on wood framing, how stud wall houses are overbuilt, the strength of threaded nails.

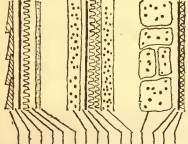
There is much good data on building with rock and earth; how to make a sliding form for rammed earth and a discussion of the strength of rammed earth and soil cement. Why don't you hear anything these days about earth wall buildings?

Inasmuch as there is nothing in bare earth to sell, no commercial ground can be found to exist its merits.

Lots more, with a bibliography at the end of each chapter for further research.

—Lloyd Kahn

### OUTSIDE WALL SECTIONS STUD CAVITY MASONRY



A: Protective covering on outside.  
B: Airspace ventilated to outside.  
C: Vapor barrier envelopes room.  
D: Thermal insulation.  
E: Airspace ventilated to outside.  
F: Protective covering on outside.

## Your Engineered House

To begin this book, and the day, what does it take to get the morning sun into the kitchen?

A delight to read before designing or building your own home. General ideas on light, heat ventilation, house placement, acoustics, financing. Specific building tips on all aspects of building but mainly post and beam houses.

This is an easy way for a beginner to frame a house (as opposed to stud-wall construction), and it gets a roof over your head right away to keep the rain off while you finish the walls. Most of this information is seldom considered by architects, and is culled from the author's building experiences. You are encouraged and told how to pick up pencil and paper and design your own home—tailor-made to your own specifications, aspirations, and finances, and, although not in great detail, how to build it yourself. A discussion and treatment of homes as human environments and a good place to start if you have no design or building experience.

—Lloyd Kahn

If I am doing work with my hands, and am in a hurry, I will prefer the most light source to be at my left and the minor source at my right. If I am left-handed, I will of course reverse the sources.

The habit of building a house in a certain way is not proof that the habit should be continued. Many of our present building methods are wrong, expensively wrong. I have tried to suggest building techniques which are inexpensively right.

### THE OWNER-BUILT HOME

Ken Kern

Volume 1: SITE AND CLIMATE  
Volume 2: MATERIALS AND COSTS  
Volume 3: HOUSE AND STRUCTURE  
Volume 4: DESIGN AND FINISHES  
Specialty Printing Co., Tulsa, Spring, Ohio

The Owner-Built Home and preliminary house design (send sketch, etc.)  
Ken Kern  
1961: 300 pp.

with preliminary design

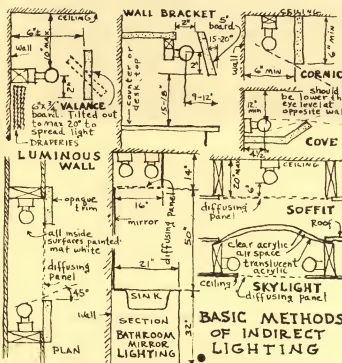
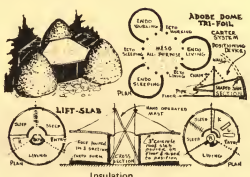
\$10.00 postpaid

from:  
Ken Kern  
Sierra Route  
Oakhurst, CA 93644

without preliminary design

\$5.00 postpaid

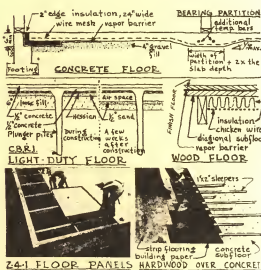
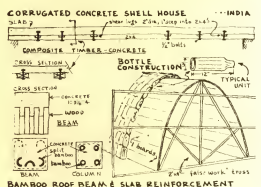
from:  
WHOLE EARTH CATALOG



Although air is a very poor conductor of heat, the insulating value of an ordinary air space is rather small, on account of the large transfer of heat by convection and radiation. Radiation is largely responsible for the ineffectiveness of air spaces bounded by ordinary building materials, such as are often in frame or other hollow walls. The low insulating value is often erroneously attributed to convection; but, as a matter of fact, from 50 to 80 per cent of the heat transfer across air spaces of ordinary sizes takes place by radiation. If the air spaces were bounded by bright metallic surfaces, the transfer of heat by radiation would be greatly diminished, since even metallic surfaces are much poorer radiators than non-metallic surfaces, such as brick, stone, glass, wood, paper, etc.

Reflective metal foil (copper, aluminum, or steel) costs less than 3 cents a square foot and can be easily installed. One should remember to keep the shiny side out (or up) and leave a ventilated air space inside (or below), and at least 1/4-inch between the foil and the surface it faces.

About 70% of the sun's heat rays can be reflected from the house by installing a white or light-colored roof. A thin layer of quartz glass or marble chip, backed by aluminum foil on a built-up tar-and-felt roof is by far the best type of surface for regions suffering a high incidence of summer heat.



### YOUR ENGINEERED HOUSE

Ken Kern

Your Engineered House  
Ken Kern  
1964: 237 pp.  
\$8.95 postpaid

from: J. P. Lippincott Company  
East Washington Square  
Philadelphia, Pa. 19105

or WHOLE EARTH CATALOG

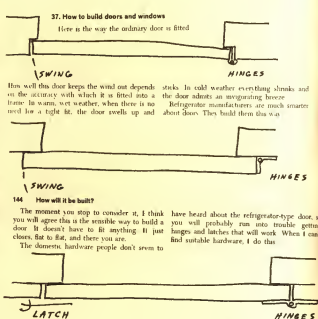
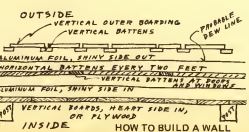
Scenery is what you see from where you live. If your scenery is to cost you nothing, you will leave it where it is, and if that scenery already has character, you will make only minor modifications. You will move yourself around, move the house around, but you will not move the scenery around until you have lived with it for a while as it is.

As a machine designer, I say that when we treat the window as a machine, asking it to perform multiple functions—admit light, admit air, or exclude it according to the weather, keep out bugs in summer, never mind the bugs in winter—and do all this at the twist of a crank without leaking or sticking—the window is bound to become expensive.

If we give the window one function and one only, to admit light, we can have all the windows we want at no extra charge. It is inexpensive to fix panes of glass permanently in place. Any smart carpenter can build a wall of glass about as quickly as he can build a wall of anything else.

As for the ventilator, it's a wooden door on the simplest of hinges, rigid, unbreakable, easy to weatherstrip, easy to screen. One frame does the whole job.

If we keep windows and ventilators separate, we wind up with more light, better ventilation, less trouble, less maintenance, and lower cost.

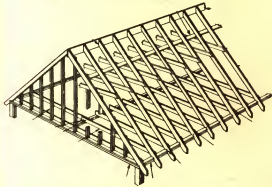


## Canadian Wood Frame House Construction

best way to learn to become a carpenter is to get some wood and a few tools and put them together somehow, however you can, practice, know the material and what you are trying to do with it. (a crosscut on a 2 by 12 is a good exercise) then, when you are ready to build something, either find someone who has built something, or take a good long look at what you are living in now, or read a book. we carry a bunch of carpentry books, their main worth is in the diagrams, from them you can figure out how other builders do it, but don't be bound by rectilinear bullsh\*t, read a wooden boatbuilding book (page 113) and figure out how to bend wood, build a snailshell house out of warped one-by-fives, or read this book. good and free.

-jd

[Suggested by Ian McKinnon]



## Canadian Wood-frame House Construction

1979p.

Free

from:  
Canadian Central Mortgage and Housing Corporation  
650 Lawrence Avenue West  
Toronto, 7, Ontario, Canada

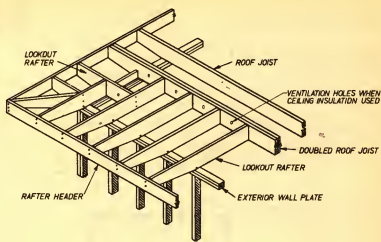
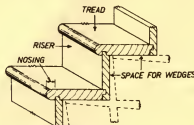
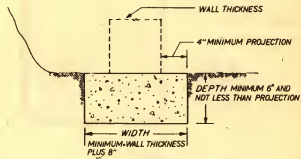


FIGURE 4.—One method often used to determine size of footings.



## Low-Cost Wood Homes

An excellent manual, with 100's of good drawings, on wood house construction. Details on pole house construction, and all aspects of wood frame buildings.

Low-Cost Wood Homes for Rural America—Construction Manual

L. O. Anderson  
1969: 112 pp.

\$1.00 postpaid

from:  
Superintendent of Documents  
U. S. Government Printing Office  
Washington, D.C. 20402

## FHA Pole House Construction

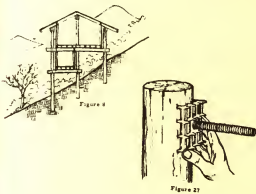
Pole type houses are easy to construct on steep hillsides, they're inexpensive, aesthetically pleasing, and ecologically sound (no need to bulldoze the landscape to construct a level platform). The holes can be dug by hand. Roof goes up first to keep your head dry while you build the floor and walls. The pamphlet says you can use regular old telephone poles. . .mm. Bibliography too.

[Suggested and reviewed by  
Kerry Rothstein]

Free

OUT OF PRINT

U.S. Dept. of Housing and Urban Development  
Federal Housing Administration  
Washington, D.C. 20410



**POLE FRAME:** When the poles are used to support the roof as shown in Figure 8, the roof can be installed early to keep the rest of the construction process dry. The extra pole length also helps to brace the structure. With two or three-story structures, the heavy timber frame will take concentrated loads and also reduces fire hazards. It allows flexibility in placing, and possible relocation, of walls.

**SPIKE GRIDS:** Heavy timber connections standard in bridge and warehouse construction, are less familiar to the house builder. A single curved spike grid, Figure 27, inserted between the pole and the beam substantially increases the strength of the bolted connection.

## American Plywood Association

What makes plywood such a desirable building material is its extremely favorable cost/strength ratio. Also, it's quick to install, as each piece you nail down covers 32 square feet.

The American Plywood Association has hundreds of pamphlets available on different uses of plywood: roofs, walls, floors; cabin plans, pole buildings, barns.

Write, asking for lists of publications:

Residential Construction Literature Index  
Agricultural Literature Index  
General Construction Literature Index  
Industrial Literature Index  
Consumer and Do-It-Yourself Literature Index

free

from:  
American Plywood Association  
1119 A Street  
Tacoma, Washington 98401



Concrete Forms	Form No.
Guide to Plywood for Concrete Forms (Sweet's insert)	\$69-90
Curved Panels	F67-1020
Nailed Plywood Box Beams	62-180
Plywood Truss Designs (Describes new plans for King Post and W-type trusses on spans 20' to 32'-8")	64-650
Floors	
2-4-1 Tongue and Groove Plywood	60-40
Guide to Plywood for Underlayment (Sweet's insert)	\$68-50
Umbrella Structure (22" wide shelter)	63-80
Plywood and Poles for Farm Buildings (Data sheet)	63-126
A-type Hog House (6' x 6' portable units)	61-430

## Small Homes Council

A truss can be made of relatively small pieces of wood, is light, cheap and therefore a more economical means of spanning distances than a solid wooden beam. Complete clear plans of 14 different types of trusses are available, 50¢ each. Also, publications on various building techniques, and a set of circulars, 15¢ each, on subjects such as Selecting Lumber, Chimneys and Fireplaces, Plumbing, etc.

—Lloyd Kahn

Brochure on publications

free

from:  
Small Homes Council-Building  
Research Council  
University of Illinois  
Urbana, Illinois



## COMING DOWN

Maybe D.R.'s acid trip ain't so groovy anymore. Maybe he wonders where Estelle has gone, and why. It's funny stuff, acid. It'll make you laugh, it'll make you cry. It'll make you wonder where your woman is, and why. It'll give you something new to say, but take away your words to say it with if you're not careful. D.R. tried to say "Estelle" but it came out as a moan. He tried to say, "Forward, on to St. Louis!" but his tongue flapped useless in his mouth.

If in the beginning was the word and the word was with God and the word was God, what are you when you're speechless? Pretty fucking depressed, if you want to know.

Depression is a rocky landing. Depression is your parachute not working after a weird re-entry.

Wham.

Grounded.

And it's stony fucking ground.

She's not there to know you're hurt, you can't call for help because your tongue won't work, he don't see your signals because he's talking all the time.

Maybe D.R.'s acid trip ain't so groovy anymore.

Maybe that steel band around his head's a headache after all.

Maybe that stained window of the countryside's an actual desert after all.

Maybe the wind is really blowing, maybe the sky is actually overcast.

Maybe Estelle was really crying.

Maybe the time had come.

"Has the time come?" asked D.R.

"Mellow," said the Greek. "Mellow."



## Fundamentals of Carpentry

Better know something about tools and materials before you start on this book. (Hand Woodworking Tools, How to Work with Tools and Wood, p. 144). Lots of meat for the beginner as well as the professional. The kind of stuff you might learn working with a good carpenter.

Mostly rectilinear construction, but with ingenuity, the methods are applicable to most wood structures.

Nice appendix with a list of Associations and Institutes, and an excellent list of reference books.

[Reviewed by Fred Richardson]

### Fundamentals of Carpentry, Vol. 2

W. E. Durbin, E. W. Sundberg  
1948, 1970; 504 pp.

\$7.40 postpaid

from:  
American Technical Society  
848 E. 58th St.  
Chicago, Ill. 60637

or WHOLE EARTH CATALOG

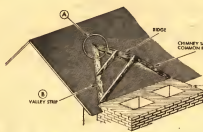


Fig. 74. A chimney saddle sheds water from behind a chimney. It may be assembled on the ground and installed after the roof is sheathed.

Fig. 28. Compression type bridging is represented by wood bridging in strength. (Timber Engineering Co.)

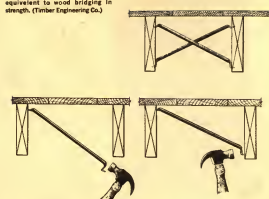
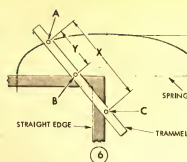


Fig. 29. Compression type metal bridging is installed with a few hammer blows. (Cleveland Steel Specialty Co.)



ELLIPTICAL TRAMLINE METHOD  
Straight edges are placed on the spring and center line. Nail one driven in, turned up points "A", "B" and "C".  
Dim X = 1/2 span. Dim Y = rise. At each "B" and "C" follow straight edge, nail "A" will make an ellipse.

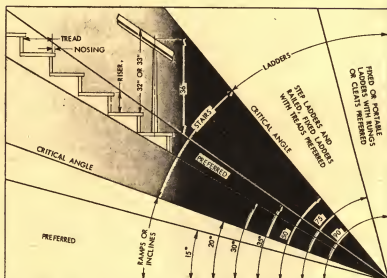


Fig. 74. Preferred and critical angles for stairs, ladders, ramps, and inclines.

(B) elliptical stair.

## Simplified Carpentry Estimating

When building, you'll do well to pre-calculate all materials and ask local lumber yards for competitive bids. This handbook, with short-cut tables, helps you quickly estimate all materials for conventional buildings: concrete, lumber, hardware, as well as labor hours.

—Lloyd Kahn

Simplified Carpentry Estimating  
J. Douglas Wilson and Ciel M. Rogers  
1962; 320 pp.

\$5.95 postpaid from:

Simmons-Boardman Books  
30 Church Street  
New York, N. Y. 10007

or WHOLE EARTH CATALOG



### A. CEMENT CONTRACTORS' METHODS

A practical method and by cement contractors, will give quick accurate results. This rule automatically allows for shrinkage.

Proceed as follows:

- Find cubic contents of footings, walls and slabs.
- Divide the cubic footage by 16. Results equals volume of concrete aggregate (sand and rock combined). Material dealers will furnish concrete aggregate in several proportions, such as 10:50 or 40:60, etc.
- To find cubic contents multiply volume of aggregate by a constant selected from table III.

TABLE III  
AGGREGATE TABLE

Max. aggregate size	Concrete	Aggregate mix	Concrete
1 1/2"	1.8	1 1/2"	1.8
1 1/4"	1.6	1 1/4"	1.6
1 1/2"	1.5	1 1/2"	1.5
1 1/2"	1.4	1 1/2"	1.4

## Wood Handbook

This bargain collection of technical data will be of use to anybody who works seriously with wood, for whatever purpose.

—SR

### Wood Handbook

1955; 528 pp.

\$3.00 postpaid

from:  
U.S. Government Printing Office  
Division of Public Documents  
Washington, D. C. 20402

TABLE 46.—Recommended minimum net retentions of creosote and solutions containing creosote for various wood products

Product and service condition	Coal-tar creosote		Creosote-solvent solutions		Creosote-petroleum oil solution	
	Lb. per cu. ft.	Lb. per cu. ft.	Lb. per cu. ft.	Lb. per cu. ft.	Lb. per cu. ft.	Lb. per cu. ft.
Ties (cross-ties, switch ties, and bridge ties)	8	8	8	8	8	8
Lumber and structural timbers:						
For use in coastal waters:						
Douglas-fir (most types)	14	14	14	14	14	14
Southern yellow pine	120	120	120	120	120	120
For use in fresh water, in contact with ground, or for important structural members not in contact with ground or water:						
Douglas-fir (most types)	10	10	10	10	10	10
Southern yellow pine	6	6	6	6	6	6
For use in coastal waters:						
Douglas-fir (most types)	14	14	14	14	14	14
Southern yellow pine	120	120	120	120	120	120
For land or fresh-water use:						
Douglas-fir (most types)	12	12	12	12	12	12
Southern yellow pine	8	8	8	8	8	8
For use in coastal waters:						
Douglas-fir (most types)	6	6	6	6	6	6
Southern yellow pine	6	6	6	6	6	6

## Practical Handbook of Plumbing and Heating

Most plumbing books are either too old or too detailed for use by a novice home builder. This book, however, gives you enough basics to be your own plumber. It explains the use of plastic and "no-hub" pipe—both systems avoid the difficult process of melting lead for cast-iron drain pipe connections.

—Lloyd Kahn

### The Practical Handbook of Plumbing and Heating

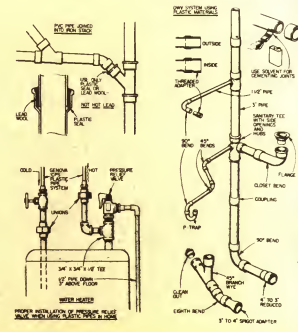
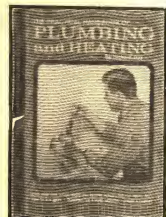
Richard Day

1969; 120 pp.

\$4.95 postpaid

from:  
Arcis Publishing Company, Inc.  
219 Park Avenue South  
New York, N. Y. 10003

or WHOLE EARTH CATALOG



## Audel Guides

I've just read a dozen or so Audel Guides, and these are some I felt were particularly useful. Some of the Audel books are quite obsolete, but much to my surprise, many have been written within the last ten years. Several have poor indexes, and some completely lack an index. The books are usually written by experts in the areas or trades described. The information in general seems to be very good.

If you are working with more or less typical American water and sewage systems, either maintaining or building, Domestic Water Supply and Sewage Disposal Guide should be a rather useful book. Wells, springs, tanks, pumps (including hydraulic ram), treatment, septic tanks, water heaters, it's all here, including many useful tables. The book is weak on the sewage end and has incomplete information on things such as hand dug, jetted and driven wells. Get the WHO book for that.

Vol. 1 of Masons and Builders Guide deals with clays, brick making, mortar, tools, brick laying, bonding, corners and rectangular openings. Vol. I covers arches and anchors, foundations, chimneys, fireplaces, repairs, estimation, and tile work.

These seem very good if you want to get into traditional brick work. The chapters on fireplaces and chimneys seem particularly useful to me. I never could get behind brick work for new construction, though.

Carpentry and Building fascinated me. Written in question and answer style, it covers many problems encountered in construction and remodeling work. Seems that these are questions that the author has received while acting as an engineering consultant for a trades magazine. Excellent sections on insulation and vapor barriers, acoustics, noise transmission and sound resistant partitions, and a beautiful miscellaneous section dealing with things like the pressures in grain bins. Good index.

Building Maintenance is intended for maintenance men in office etc. buildings. Looks like it would be very good for them, less useful for the home handyman. Information is included on painting, plumbing, concrete, carpentry, roofing, glazing, sheet metal, heating and air conditioning. Gives good, brief, and simple directions and assumes that the reader has at least some sense and native intelligence.

No special knowledge is required to use the two-volume set, Do-It-Yourself Encyclopedia. If you can get around the projects (I) in questionable style(s), there is a lot of good stuff relating to home improvement and home maintenance. A little hard to find your way around in until the second time through, it is actually fairly well organized. Far-out 1950's pictures.

Reviewed by Fred

### Domestic Water Supply and Sewage Disposal Guide

Edwin P. Anderson  
1980, 440 pp.  
\$4.50 postpaid

### Masons and Builders Guide, Vols. I, II, III, & IV

Frank D. Graham  
1924, approx. 300 pp. each  
\$4.00 each, postpaid

### Do-It-Yourself Encyclopedia (2 vols.)

1968, 1012 pp.  
\$9.00 /set, postpaid

from  
Theodore Audel & Co.  
A Division of Bobbs-Merrill  
330 West 62nd Street  
Indianapolis, Indiana 46268  
or WHOLE EARTH CATALOG

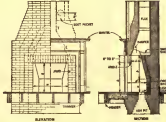
Audel's Books are cheaper from  
Steve U. of U.S. General (p. 140).

### Carpentry and Building

Harry F. Ulvry  
1966, 434 pp.  
\$5.95 postpaid

### Building Maintenance

James G. Vezt  
1966, 437 pp.  
\$5.50 postpaid



Expert foresters... advise that, although the hickory is a sturdy and persistent grower, a tree which has grown and matured under forest conditions cannot tolerate a disturbance of its root system; also, there may be danger of injuring the tree described if the roots are cut close to the trunk. One tree is shown in the illustration, from a circle immediately outside the crown, the main feeder roots extend outward and downward at an angle of approximately 45 degrees. At times these roots go very deep. In addition, a system of very shallow roots, approximately 12 to 24 inches beneath the surface of the ground, extends outward in all directions. These roots also carry water to the trunk of the tree, and serve to anchor the tree upright in the soil. These are the roots that will be injured by digging for the foundations of the house.

Actually, there is no way to accurately forecast the reaction of the trees. Stay away from the trees as far as possible. The disturbed trees should be supplied with plenty of water and heavy feedings of fertilizer for some time to enable them to regain the loss of strength occasioned by disturbing the roots in the affected areas of the root system.

Carpentry and Building

Water Dousing—Although numerous persons consider the forked stick method of locating underground water as a mere "fanciful illusion," the fact still remains that extractable water has been found by this simple method throughout the ages.

Water dousing consists essentially of the carrying of a forked twig of each, aspen, or maple over the area where the search for water is to be made. The process is performed essentially as follows:

Grasp the ends of the twig (one in each hand) with palms upward. When commencing to walk, the butt of the stick should be pointed upward. As moving water is approached, the butt end of the stick begins to dip downward until the moving water is intercepted at which location the butt and points straight down. As the water is approached, the forked twig has turned through an arc of 180 degrees. The stick will in some instances break under the grip as the butt dips downward. Pliable twigs will bend down despite the effort to hold them straight.

Most dowsers believe this unique ability or power comes to a person with birth. They also believe that this occult faculty can be developed and its use expanded by constant study and practice. It is, of course, a fact that many people have this ability without being aware of it, never having had the reason for the experiment. Some students of the matter believe about one person in a thousand has some dowsing ability, although perhaps only about ten per cent of these latter have the ability to become good dowsers.

It cannot be too strongly emphasized that no scientific explanation exists for the location of extractable underground water by means of dowsing. The proof exists however, in thousands of usable wells which actually have been discovered by this uncanny method.

### Domestic Water Supply

A well designed and properly installed drain is regarded as essential, particularly in cold climates. When no drain is used the throat opening (p. 3) should be 4 inches for fireplaces not exceeding 4 feet in height.

Placing the throat well forward has another advantage, namely that of forming a smoke shelf at the damper level. This shelf aids in stopping the down drafts which will almost invariably occur if the damper is closed. The fireplace is made to rise vertically, in the same plane as the back of the flue.

The opening above the smoke shelf should be "gathered" or contoured to the size of the flue by corbeling, this being done with the least height practicable. Up to the level of the clay flue lining, the brickwork should not be less than 8 inches thick, because the space immediately above the damper is the hottest place of the chimney.

In small fireplaces, a depth of 12 inches will permit good draft. If the throat be properly constructed, but a minimum depth of 16 to 18 inches is advised to lessen the danger of brands falling out on the floor.

In construction of a fireplace the following essentials should be attended to:

1. That the flue have the proper area.
2. That the throat be correctly designed and have a suitable damper.
3. That the chimney be high enough for good draft.
4. That the shape of the fireplace be such as to direct the maximum amount of radiated heat into the room.
5. That a properly constructed smoke chamber be provided.

Masons & Builders Guide

## Screw Appreciation

You will see by my enclosure that the subject of this letter is screws. Since this is probably too commonplace a title to attract much attention let call them fastening devices. This particular device is a combination of so many improvements on the standard wood screw that I'll be surprised if someone else hasn't brought it to your attention. In case no one has, here goes.

It's a Sheet Rock Screw. They are made to attach sheet rock to metal studs. They are designed to be driven with a power screw gun. They can be driven by hand, of course, and in fact are easier to drive than ordinary screws. Ideally, however, one should use a good quality variable speed and reversible drill. In the hands of the woodworker the applications are unlimited.

To appreciate the screw, one must break it down to its components: 1. It has a self tapping point. No nail is required to mark the location and keep it there. It zips into wood or thin metal.

2. There are two threads. The h/t thread is at 30 degrees instead of the normal 60 for faster penetration. The L thread reduces wobble and provides lateral pressure.

3. The shank is reduced in size giving greater thread exposure and gripping power. I'm told that it holds better alone than the same number of regular screws and glue. My experience with them seems to verify this, but I can't prove it. The narrow shank also eliminates the need to pre-drill in all but the hardest woods and thicker metal. There are minimum splitting problems.

4. The finish is an attractive gray created by a zinc phosphate coating with baked-on linseed oil. It is supposed to be corrosion resistant.

5. The head is a patented shape called "Bugle" head. For the woodworker, the advantage is no countersinking. It puts down flush with little or no surface damage.

6. The slot is #2 Phillips, the advantages of which are well known. The pros use magnetic bits and don't even hold the screw to guide it as it's being inserted. The steel they are made of is so tough it's almost impossible to damage even the appearance of the slot with a spinning power bit.

7. Since the awl, drill and countersink have been eliminated, the speed in driving with power or by hand is obvious. They are equally easy to extract if you make a mistake, want to disassemble your work and/or salvage the screws.

If the above sounds like the manufacturer's sales pitch, it is. I copied most of it from the specifications, omitting the many other advantages that are probably only of interest to the sheet rock people. They are made in 1/4", 3/8", 1/2", 5/8", 3/4", 1", 1 1/4", 1 1/2", 1 3/4", 2", 2 1/2", 3", 3 1/2", 4", 5", 6", 8", 10", 12", 14", 16", 18", 20", 22", 24", 26", 28", 30", 32", 34", 36", 38", 40", 42", 44", 46", 48", 50", 52", 54", 56", 58", 60", 62", 64", 66", 68", 70", 72", 74", 76", 78", 80", 82", 84", 86", 88", 90", 92", 94", 96", 98", 100". They come in various lengths and styles. There are variations for plastic, trim, sheet rock to wood, and a plain point for wood only, to mention a few.

After using them, their superiority is so apparent that one feels cheated if he has to use the old kind again. If all this is so, why isn't everybody using them? Why can't you buy them in the neighborhood hardware store? I don't really know. Anyway, I get mine at a building materials supply house that specializes in sheet rock, lath and plastering supplies, etc. They cost between \$8.00 and \$22.00 per thousand. I don't recommend them for the novice or occasional do-it-yourselfer. But for the pro who is "always building in one thing or another" they are fabulous and worth obtaining. Instead of being the specialized fastener they were designed to be, they are damn near universal. The only place I would hesitate to use them would be on a job where shear was important, such as a gate hinge.

Fred Barnett  
Port Orchard, Oregon



## WHEN THE TIME CAME

When the time did come, the Greek did not dally. He put the items he'd used in the food ritual back in the leather bag, and carried it and the jug of water to the bus, D.R. following behind. D.R. started to get in the back, while Estella, who had been the Greek directed him to sit in front with him. D.R. obeyed, although he was uncomfortable in the front. He was close to true distress now. He was confused because he didn't know how strong he was; he didn't know how far to trust his mind's version of things. He felt a little afraid of the Greek now, but he didn't know if that was just paranoia or his straight mind picking up raw warnings from actual stimuli. He very definitely felt threatened, but he could not be sure what by, and that made the moment seem even sadder than ever. His mind was very neatly divided in two. Half of it was that it was muddy, but it was hard to keep with which side was which because both sides claimed to be clear, and each denied that it was muddy. The sense was that of being surrounded and infiltrated by enemies, within and without. But the enemies were all unseen, and the clear half of his mind understood that very likely he was imagining the whole thing.

If Estella had been awake she would have noticed D.R. in an instant. She would have seen that he was feeling freaky, and told him it was okay, to go ahead and find freaky, that she would remain there before him as a living, conscious presence in a ward and abstract world. But Estella was asleep and the sound of Ugar's motor didn't disturb her. D.R. didn't learn until later that Estella had closed herself heavily on downers, but that knowing he could tell that her sleep was very deep, that was just what Estella's body didn't disturb her. D.R. didn't learn until later that Estella was far away, and unavailable to him. D.R. felt a powerful urge to go to her, though for whose sake, his or her's, he wasn't sure. But everywhere he so much as glanced back at Estella the Greek looked in at the corner of his eye in a strangely intimidating way and froze D.R. in his seat.



## Wiring Simplified

more than that this book is a most useful tool for the home electrician, the thing I like about it is that it has a hole punched all the way through it, for hanging over a nail, that is a kind of practicality that all american publishers should learn, everything you'll need to wire your home yourself.

-jd

## NEW EDITION WIRING Simplified

by H.P. Richter



BASED ON  
1968  
CODE

### Wiring Simplified

H.P. Richter

1968, 143pp.

\$1.25 postpaid

from:  
Park Publishing Company  
Box 8527  
Lake Street Station  
Minneapolis, Minnesota 55408

or WHOLE EARTH CATALOG

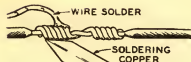


Fig. 4-25. In soldering, do not dip rod solder on cold wire. Heat the wire until it is hot enough to melt solder.

In residential and farm wiring, one of the wires is always grounded, that is, connected to a water pipe or driven ground rod. The grounded wire is known as the neutral wire; all other wires are known as "hot" wires. It is most important that you remember the following four points:

1. The grounded neutral wire is always white in color.
2. The grounded neutral wire must run direct to every 115-volt device to be operated (never to a device operating only at 230 volts).
3. The grounded neutral wire is never fused.
4. The grounded neutral wire is never switched or interrupted in any other way.

With one exception (which will be discussed later) white wire may never be used except as a grounded wire. Other wires are usually black but may be some other color, but not white (with the one exception just mentioned) or green.

The white wire must run to every 115-volt device other than a switch; the other wire is usually black but may be some other color, but not white or green. Examine a socket or similar device carefully and you will find that one of its two terminals for wire is a natural brass color, the other is a white color, usually nickel-plated or tinned. The white wire must always run to the white terminal. In the case of sockets, the white terminal in turn is always connected to the screw shell and never to the central contact of the socket. Switches for controlling lights, etc., never have white terminals.

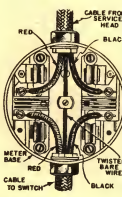
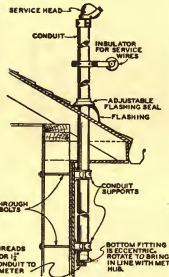


Fig. 8-22. New wires are connected to the meter base or socket. The new, unsheathed wire is always connected to the central contact of the socket.

## National Electrical Code 1968 Guide to the 1968 National Electrical Code Electrical Code for One- and Two-Family Dwellings

The Code is not law, except as adopted by local ordinances, but its requirements should certainly be met as a minimum in all wiring. Check with your local building department for their code or revisions, and permit information if you want your wiring to be legal. In any case, use the Code as a minimum.

The regulations set up seem to me to be quite reasonable and based mostly on safety. It is somewhat hard to use as a reference because it has a poor organization index. The index is very complete if you can get into its system.

Following the Code strictly will produce a safe installation. Producing one that is convenient, efficient, practical, and allows plenty of room for expansion requires planning and study of wiring books such as Sears and Wards electric wiring books (500), or Wiring Simplified.

The Audel Guide to the 1968 National Electrical Code is a non-official interpretation and clarification of the NEC. It is not intended to replace the NEC, but in most cases it would be usable by itself. Its greatest handicap is that it has no index.

For people working only in residences, the new Electrical Code for One- and Two-Family Dwellings is much easier to use than the NEC, from which it is excerpted.

Suggested and reviewed by Fred

### National Electrical Code 1968

1968, 466 pp.

\$2.00 postpaid

### Electrical Code for One- and Two-Family Dwellings

1968, 133 pp.

\$1.75 postpaid

both from:  
National Fire Protection Association  
60 Batterymarch Street  
Boston, Mass. 02110

or WHOLE EARTH CATALOG

### Guide to the 1968 National Electrical Code

Robert E. Palmquist

1968, 461 pp.

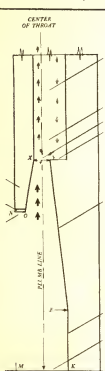
\$6.95 postpaid (cheaper from

Silvo or U.S. General)

from:

Bobbs-Merrill Company  
4300 West 62nd Street  
Indianapolis, Indiana 46206

or WHOLE EARTH CATALOG



## Wood (Coal, Oil) Cook Stoves

Here's a company that makes good, big, old-fashioned wood burning kitchen ranges as well as belly coal stoves in five sizes, huge wood burning furnaces, Franklin stoves, parlor stoves, ship stoves, and more stoves.

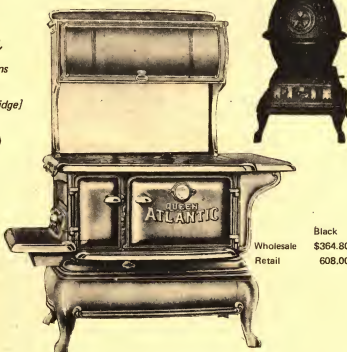
These appear to be really well made expensive major appliances. Most are convertible for using wood, coal, oil, or gas as fuel. The cook stoves offer water reservoirs or coils for heating water, warming ovens, extra large ash pans and all sorts of accessories.

(Reviewed by Fred Richardson  
Suggested by Gordon Breckenridge)

Literature and stoves from:

Portland Stove Foundry Co. (They may have dealers in your area.)  
Sales Office  
Box 59  
Sterling Junction, Massachusetts 01565

Wholesale \$ 75.00  
Retail 125.00



Black  
Wholesale \$364.80  
Retail 608.00

### Superior Fireplace

Seems sensible. Get this metal fireplace, and let the fire heat air in all directions, get warm air flow going in the room. It should be easy to lay masonry up around the metal shell. —SB

### ECONOFORM

Warm Air Circulating Fireplace Unit



\$84  
For single-opening fireplaces

Information  
from:  
Superior Fireplace Company  
4325 Artesia Avenue  
Fullerton, California 92633



### For Wood ONLY

	Stove	W/Reservoir
Wholesale	\$123.00	\$172.20
Retail	205.00	287.00

F.O.B. Portland, Maine

## Wood Cook Stoves

When I found I could get a used, "pretty good" wood stove for 20 bucks I gave up the new ones. Maybe that's what a lot of folks do. They're plentiful and cheap in used condition in northern Michigan. Probably all over. Run an ad in a newspaper.

Peace,  
Gordon Breckenridge  
Alpine, Michigan

98 Stoves  
Shelter

## The Forgotten Art of Building a Good Fireplace

About a year ago I became interested in the mechanics and skills necessary for the construction of super-functional living entities and the reconstruction of colonial homes. Recently, during a visit to New England, I took a trip to the Vermont Country Store in Weston, Vermont and happened upon a really funny book by the store's owner, Vrest Orton, on the art of building a good fireplace, one that throws the heat out and does not use Ben Franklin's observations on fireplaces design.

An inventive inventor, Count Rumford of England, formulated the basic and seemingly immutable principles of fireplace design in 1795. These fundamentals have remained virtually unchanged since that time—over a span of 176 years. Rumford was a probing fellow, having discerned convection currents and having invented the photometer and a method of boring cannon. He was the first to understand the qualities of radiant heat and used Ben Franklin's observations on fireplaces, especially on the dissipation of smoke.

This quality paperback joyously and simply tells how to design a total, functional fireplace, much unlike today's new, low abortion, which does not radiate heat properly. Rumford's fireplaces radiate heat warmly into a room's atmosphere and assure that the smoke is drawn upward with ease. Highly recommended for anyone interested in fireplaces.

(Suggested and reviewed by  
Stephen Leases)

### The Forgotten Art of Building a Good Fireplace

Vrest Orton

1969, 60 pp.

\$2.00 postpaid

from:  
Yankee, Inc.  
Dublin, New Hampshire 03444

Look at Diagram A. About twelve inches above the lower edge of the lintel or arch (at point Y), on the back wall of the chimney or throat, there must be constructed a small shelf, called the smoke-shelf. This brick shelf, projecting from the slanting back of the fireplace wall, out toward the front, is about three to four inches wide, toward Point X. It is laid horizontally, of course, completely across the entire back wall. This is the air-mixer, the function of which can easily be seen by the arrows in Diagram A, showing movement of air.

This is one of the most important features of Rumford's principles. This three-to-four-inch deep opening is standard and must not vary, no matter how big the fireplace.

## Aladdin Kerosene Lamps

Coleman lamps are terrible—they hiss and clank and blind you, just like civilization.

Aladdin is the answer if you need good light and 117ac isn't around. It is bright, silent, and requires no pumping. (It does require some babying to keep the mantle from smoking up; it's like not burning toast.) British made and effectively designed, the lamps are available in this country from:

Aladdin Industries, Inc.  
Kerosene Lamp Division  
Nashville, Tennessee 37210

or WHOLE EARTH CATALOG

—SB



Some of the Aladdins are rather ornamental. The simplest designs are:

- B-165 Font Lamp (aluminum, w/o base) \$22.95 shipping weight 2.5 lbs.
- B-140 Table Lamp (with base) \$23.95 shipping weight 2.7 lbs.
- and B-223 Hanging Lamp \$28.95 shipping weight 3.5 lbs., shade extra

Parts:	
N-6400 White shade	\$3.95
N-103 Chimney	\$2.40
N-150 Mantle	.98
N-198 Wick	.98

## Aladdin Heater

You listed the Aladdin Kerosene lamps in the Fall 1970 catalog, but not the Aladdin Kerosene heater (Model "Blue Flame" #4495), which was used by Sir Francis Chichester on Gypsy Moth IV and by me on Kodak Island last winter.

Daniel Earle  
Anchorage, Alaska

## Aladdin Tips

The lamp's efficiency and utility can be increased by taking two steps, which I've not seen reported anywhere else "in the literature." First, it is not as bright as a pressure lantern; this deficiency can be resolved by taking a second Aladdin Chimney and slipping it down over the first. This increases the overall height with no loss of stability. It just sounds a little awkward. (It's much brighter!)

The second drawback is that the d-mixed thing does get blackened up if you turn the heat too high. One way to clean the charcoal off the mantle is to turn the wick very, very low and slowly, very slowly burn it off. This takes, as I recall, from twenty minutes to an hour. The second I learned from an African teacher who walked into my house about three months before I was going to depart and, noting that the lamp was turned too high, casually picked the salt shaker off the table and sprinkled a little salt down into the chimney. The mantle cleaned itself in seconds. I don't know why it works, all I really am sure of is that I hated him for that gratuitous display of African technological superiority for at least the remainder of the evening.

The second chimney, by the way, can be an old one with a few cracks or a small piece broken off. I loved that lamp, especially after the night I tried to catch a Coleman-type lamp from falling off the table. I carried cars for over a month. The Aladdin is a cool burning, lovely piece of machinery.

Guy M. McBride  
Nashville, Tennessee

## Architects and Hot Water

Charette Corporation of 2000 Massachusetts Avenue, Cambridge, Mass.

Describes itself as "EVERYTHING The Architect Needs For Drafting Design, Presentation, & Model Making."

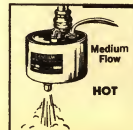
CATALOG on request. From my experience they have the finest quality, are reliable, good prices on all items, overwhelming volume of stuff in stock. They were set up about 5 years ago to fill a need, bringing drafting and architectural supplies and technology up-to-date. When you see their store you know they have done it.

Landon Corporation, 2211 Broadway, NY, NY 10024

makes and sells a hot water heater that plugs into the pipe very simply, and heats your water as it runs out. There's

a limit to its total effectiveness, as far as total volume goes, but for a campsite, or house, or trailer living, it does a grand job. It weighs less than two pounds, needs electricity, and costs about \$35.

T. H. Neel  
Cambridge, Mass.



## Aladdin discount

Through the Whole Earth Catalog I was recently turned on to Aladdin Kerosene Lamps, and am now using mine in my cabin in the Colorado Rockies. For those seeking an alternative to the ELECTRIC SOCIETY, the Aladdin is without equal, producing a soft 100 watt light. In return for your turn-on, I have obtained a dealership from the Aladdin people, and can turn people on to them at a 30% DISCOUNT. I hope that you will be able to place this information in your publication.

OM SHANTI,  
Gordon Williams  
Ward Star Store  
Box 213  
Ward, Colorado 80481

P.S. I have expanded my line to Aladdin heaters; water beds.

## Eagle Kerosene Lamp

If you're reading by kerosene light, and you aren't up to an Aladdin, you probably could use a reflector and wall bracket. They come with this lamp.

—SB

Eagle Kerosene Lamp (with reflector and wall bracket) \$4.39 plus shipping

from:  
Thermwell Products Co., Inc.  
150 E. 7th St.  
Pateron, New Jersey 07524



## Ashley Thermostatic Wood Burning Circulator

This is a unique wood burning stove. It has a thermostat which controls air intake, thereby burns much less wood than an ordinary stove. Will go up to 12 hours without refueling. In cold climates people build just one fire a season, adding wood 2-3 times a day. It takes any type wood, up to two feet long.

One kept us warm when we lived in a chicken coop with cold concrete floors and now an Ashley is the only heat we have in a 900 sq. ft. house with high ceilings.

The firebox is airtight and there is a lever on the air intake you can set for the desired temperature. A temperature-sensitive device (bi-metal helix coil) then automatically regulates air flow to keep heat at the setting you've chosen.

—Lloyd Kahn

This is a mighty good little hard-head'n' cheap working wood stove.

—Ken Kesey



\$80-120 plus shipping for different sizes of the "economy line" (Prices lower the closer you are to the factory in Alabama)

from:  
Ashley Automatic Heater Company  
P. O. Box 730  
Sheffield, Alabama 35660

or  
Ashley Spark Distributors, Inc.  
710 N. W. 14th Avenue  
Portland, Oregon 97208

or WHOLE EARTH CATALOG (\$91.95 in store)



## CAPTIVE AUDIENCE

So this is the situation in the back seat as they drive out of the rest area: Estelle is asleep in the back seat, Divine Girl is some sort of psychic prisoner sitting in the front seat beside the Greek, and the Greek, in charge of the bus now, driving east across the barren, windy plain toward Oklahoma City, is talking on and on about health, truth and love as destinations along the Middle Way. His rap began as soon as they hit the freeway again with a final lecture to D.R. on breathing, and the holy sound of OM, and continued into an explanation of the concept of Karma and ways in which images like the Third Eye reconcile Zen and the mystic point of view with all modern psychology from Freud through Reth to Jung. Within fifty miles the Greek had ascended into a description of the physiology involved in the experience of Unitive Consciousness, and within a hundred miles of that he had called D.R.'s attention to the I-Thou theme in the Secret Songs of the Hindus and analyzed the personal aspects of the relationship between Ouspensky and Gurdjieff, which amounted, of course, to a kind of rambling introduction to the Greek's abbreviated version of his own life story.

We'll get into that life story a little later on, but before we do it's important to understand what was happening with Divine Girl as he told it. The Greek said, "The problem, of course, is that young people have grown up oriented to a Twentieth Century Einsteinian concept of unitive time while their elders remain stuck in Nineteenth Century industrial time, which is fragmented." D.R. nodded and gurgled a few nonsense sounds but his attention was not on the Greek. He was thinking about Estelle, asleep on the mattress behind him. D.R. was desperate to get back to her. He wanted to wake her up and hold her in his arms and tell her that he was sorry, that he was going to be a lot better from now on. He wanted her to open her eyes, and recognize him, and include him in her world again. It was awful, feeling excluded. D.R. did not feel in her world or the Greek's, and he had no world of his own to occupy. He was in a vast, dark limbo somewhere and suffering terribly in his mind.

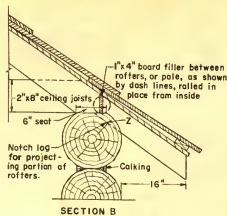




## Building a Log House

somewhere,  
between missoula and great falls,  
is the most beautiful house  
in the whole earth,  
a two-story log cabin,  
up on a knoll,  
smiling  
for two bits this book  
will put you there.

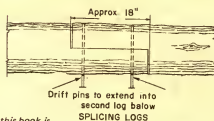
—jd



SECTION B



FIGURE 19. — Pole chinking.



Drift pins to extend into second log below  
SPICING LOGS

## Building a Log House

1914, 1966, 43pp.

\$5.00 postpaid

from:  
Cooperative Extension Service  
University of Alaska  
Box 1109  
Juneau, Alaska 99801

The editor at University of Alaska just told us this book is being rewritten, tailored more to Alaskan conditions. Bulk orders to the Lower 48 may not continue. They suggest that someone else reprint the book (with appropriate credits). It's public domain.



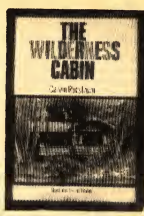
## The Wilderness Cabin

For more details on log construction, site selection, use of heavy timber tools. This gent has built some cabins.

—S8



Cabin on the Yukon River at 50 degrees below zero.



The Wilderness Cabin  
from:  
The MacMillan Company  
Calvin Rutstrum  
1961; 160 pp.  
\$5.95 postpaid  
Riverside, N.J.  
08075

or WHOLE  
EARTH  
CATALOG



The V-Flank Corner

But an even better and more direct method than personal search is to go to the county seat in the county where you want to build. Ask the county auditor for a list of tax-delinquent properties, and the descriptions and plats of each location. During your first free week-end, examine the sites. If you find something you like, pay the back taxes.

When the original owner has failed to pay the taxes for a certain number of years—in many states the period is five years—and you pay the back taxes, you can get what is called a "tax assignment" from the county. Your final ownership paper is about equivalent to a quit-claim deed. This is good enough while you personally own the site. Should you finally sell the property, it is best to have an attorney obtain a Torrens title for you, or procure a warranty deed through legal formality.



Method of Setting in Place Joints of Round Logs



Method of Setting in Place Joints of Posts



## Yurt

A friend of ours got interested in the yurts used by nomadic people of Central Asia. Yurts are round buildings (tents) made out of a lattice work of sticks covered with sheets of felt. The roof is a truncated cone. The opening serves as skylight and smoke hole.

After building a number of yurts similar to the Mongolian ones out of different materials, Bill decided that he would like to build one out of milled lumber. I helped him construct one similar to the one in the plan. It is not difficult and certainly cheap. I do not know how easy it will be for someone who knows nothing about yurts and carpentry to build one, but Bill usually answers letters and I am sure he will be able to answer specific questions about the construction. He is currently revising and up-dating the plan, incorporating what he's learned in the past year.

[Suggested and reviewed by Jur Bekker]

## Yurt Construction Plan

\$3.00 postpaid from:  
Bill Copperthwaite  
Bucks Harbor, Maine



Home's Where Yurt

A funky newsletter of yurt construction and living trips.  
From (send postage at least):

Daves Hill Commune  
Box 53  
West Danby, N.Y. 14896

## Cheap and Speedy Finish

**SPEEDY FINISH** A penetrating wood finish developed by the U.S. Department of Agriculture is applied super-fast with a weed sprayer. It makes up in a grey-green shade only, but can cover a barn in two and a half hours, costs just \$16 a gallon to compound. Researchers estimate that it will protect wood for four years. It's recommended for fencing, summer cottages and other structures built of low-grade lumber. The product isn't available commercially, but you can have the formula free of charge. Write the USDA Forest Products Laboratory, Madison, Wisconsin 53705 and ask for: Research Note FPL—0134, "Experimental Chromate Finish."

I found this bit in "Woman's Day". Maybe ECF would make a community look like a grey-green prison compound, but it sounds cheap and good. Worth looking into?

Dorcas Webb  
Bridgton, Maine



THE SCHEME

The Greek said, "Some say that God is merely a compromise between the time it takes light to travel across the Einsteinian universe, and the time it takes light to cross a neutron, that space is merely a snapshot of time, and time is space in movement. Personally . . ."

D.R. nodded and mumbled. But what he was thinking about now was his tape recorder which lay in a pile of junk behind the driver's seat. D.R. had a scheme. His muddy mind kept saying the scheme would not work, but his clear mind was convinced that it would. The scheme was to bring the tape recorder into the front seat to listen to the Greek while D.R. sneaked to the back with Estelle. D.R.'s muddy mind instead it could not work, but his clear mind was convinced the Greek would not know the difference. Surely it was worth a try. The problem was maneuvering the recorder to the front seat without attracting the Greek's attention. All he needed was three seconds. All he had to do was edge off his seat, lean and reach behind the Greek and he would have it. Two seconds, even. Two seconds would be plenty.

Ahead of them on the freeway just then were two big semis making simultaneous emergency stops to avoid hitting a Rambler that was trying to avoid hitting a sheep that had wandered onto the freeway. The trucks were very near to crashing, and it took the Greek five full seconds to realize the emergency, to slow down and pull into the outer lanes and then speed up, and by the time he had Uge lined out and cruising smoothly again, D.R. was back in his seat with the recorder on the floor in his fast. After that it was a simple matter to turn it on and tune it in to the Greek's voice, and then steal away to the back. The Greek talked on, unsuspecting nothing.

Cabins  
Shelter

101



## Earth for Homes

### Handbook for Building Homes of Earth

these two together give all the grit on the subject, practical, non-historical (here's how pithecanthropus did it) get out and do big mudpies approach, a lump of clay, live with it.

-jd

### Earth For Homes: Ideas and Methods Exchange PB 188918

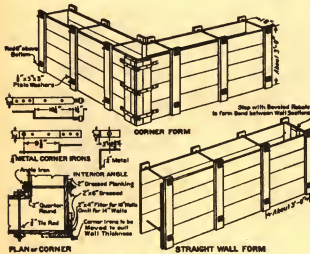
\$3.00 postpaid

from:  
Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20402

### Handbook for Building Homes of Earth PB 179 327

\$3.00 postpaid

from:  
Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20402



Corner and Straight Wall Forms for Rammed Earth.



### How to Dig a Dome

Our first dome is almost completed. Name Rana Grande from the arched windows that were thought to look like frog eyes. Tomorrow we finish off the first third of the pur and then decorate the dirt dome. Wednesday we expect to carve the mound. Weds afternoon to the vigils. Thursday we finish Rana Grande & let it cure for the grand excavation & dedication Saturday.

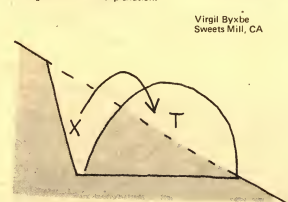
The dome of Rana Grande is 12 ft in diameter & 8 ft high. It is more or less a hemisphere with the front sliced off. (Don't worry about the spelling. I know how to spell but this typewriter doesn't & I don't give a damn.) It is a mound of earth upon which we are putting a 6 to 4 inch shell of cement. Saturday we will excavate the dirt mound and reveal the completed room. It was a fireplace poured at the same time.

This dome method should have real applicability to the alternative community because it is cheap, artistic, organic, romantic, practical. This one is taking fifteen sacks cement @ \$1.50, 10 tons concrete mix @ \$2. & 155 worth of reinforcing bars, screen door (from the dump), and window \$5. Total about \$65.

Another advantage is that there are no skills needed. See one and build one. Simple. You don't even have to be artistic. Tools needed are shovel, wire pliers (for wiring reinforcing bar together). Concrete mixer not, strictly, required. Do it (mixing) in a box. So the other tool you'd need would be a concrete mixer or hoe with mixing box.

Our domes are built into the side of a hill. Much of the structure will be below grade level when finished. Some of excavated dirt to be used to form a terrace in front.

See diagrams for more explanation.



Dirt from X (excavation) is thrown on top of hill to finish off dome. The mound is formed partly by excavating a ditch away from a central circle & partly by throwing the excavated material on top.

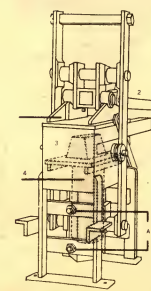


Fig. 36. CINVA-RAM machine for the production of soil-cement blocks, experimentally made.

## Soil-Cement—Its Use in Building

A well-detailed booklet on the stabilization of earth with cement, and describes all aspects of using the Cinva-Ram earth moulder.

—Lloyd Kahn

### Soil-Cement—Its Use in Building

1964; 85 pp., 93 illustrations

\$1.50 postpaid

from:  
United Nations  
Sales Section  
New York, New York 10017

### FORMS IN WHICH SOIL IS USED:

Soil is used in construction in the following forms:

- (a) In the form of rubble, cut from the surface of the earth, in pieces or blocks of soil.
- (b) As bricks, made in wooden forms or molds with soil moistened to the required degree.
- (c) Moistened soil compacted *in situ* in suitable rigid frames to form monolithic walling (rammed earth).
- (d) As stabilized soil, by combining it with an agent in order to improve its constructive properties.

### Soil-cement roofing

If it is desired to use soil-cement as roofing for a house, the following methods may be used: (a) Laths or reeds are laid on the roof truss or joists and nailed down; a plastic mortar of cement and (sandy) soil in the proportions of 1:7 by volume, with visible fibers 3 cm in length added as a reinforcement in the proportion of one part to four parts of mortar, is spread over the laths or reeds. The layer of mortar should be 3 cm deep, dry with over the laths or reeds. The layer of mortar should be smoothed with a trowel. After the material has had time to dry and harden, two or three layers of continuous material are brushed over the surface in order to make the roofing waterproof.

### Slow, Heavy, and Sweaty

First off, thanks for a lovely review of my book, *Stone Shelters in Spring, 1970*. It's had other flattering reviews, but your anonymous reviewer read it and understood it, which was not true of some of the others. You even picked the absolutely best passages to quote. Seems I must have a brother out there someplace.

Secondly, I am probably one of only a handful of your readers who have actually built earth houses. (Mine was in Orinda, Cal., 1961). I have some words of caution about building with dirt:

1. It's more work than with any other material, bar none. It's slow, heavy, and sweaty. You move tons of stuff every day to make a few square feet of wall.
2. Rammed earth and adobe are the most work. They make good walls, but not roof structure, so you don't save very much money. Not usually worth it, unless you happen to like the solidity of those big, thick walls.
3. Earth is great in warm climates, but in any moderate or cold climate it'll give you the rheumatism by Thanksgiving time.
4. I built using an African technique that lets you build domes and vaults without formwork. That's the whole house, roof and all, in dirt, and that's cheap (about \$1/square foot for materials). None of your references cover this sort of thing. Two troubles remain, however:
  - a) It still breaks your back and takes forever.
  - b) This type of construction shrinks and cracks a lot more than adobe or rammed earth—a real problem.

Edward Allen  
Wellesley, Massachusetts

### For Stone Houses

I read the letter about rocks for building purposes (p. 21 in the March 1967 issue). I'm a geology major, and think I can help a little.

First, he says the land is covered with volcanic rocks. These will fall into three types

1. Dark, heavy, fine grained basalt.
2. Glassy massive obsidian, various colors.
3. Light weight cellular pumice or scoria.

Of these three, the basalt is the best for building. It's tough, very hard, and weathers slowly. The obsidian is essentially glass, and though stronger than steel, it is easily broken. It is strong enough to build with, but may be too non-porous and smooth to mortar together. It also weathers slowly. The pumice is a no good for use requiring standing water, such as a wall. However, it will make an excellent insulator for hollow walls or sub floor fill.

If the rocks are of many different types, you will have to examine each type for these necessary characteristics:

1. It should be hard and heavy.
2. It should be fine grained.
3. It should not weather appreciably.

To check weathers, break the rock and match the fresh surface to the old surface. Only a slightly bladed appearance on the old surface is permissible. A different color on the outside and a good pool for use is indicative of severe chemical weathering. Also check the hardness of the weathers surface. If it is flaky or crumbly, it's no good.

Also check the well rounded rocks in any stream beds which may be on the property. These rocks are often the most resistant and hardest

Roy L. Porter  
Virginia Beach, Virginia

Bellevue-Valvair  
200 W. Exchange Street  
Akron, Ohio 44309

I built two houses here using CINVA-RAM—where the owners made the bricks using my machine. Both buildings were a success and the machine certainly has its place.

However, I cannot afford to produce the block because of the big labor factor: it is only economical for owner-builder construction. (Which is great!) I still prefer the monolithic wall, and use a Magdel form and soil-cement machine. All this info can be found in the 2 chapters of my book *Owner-Built Home*, p. 94).

Sincerely,  
Ken Kern



## Stone Shelters

This is an utterly beautiful book, a study of the people, history, geography, and vernacular architecture in a small area in southern Italy known as the Murgia of Trulli.

The several different types of stone shelters of the region are covered extensively, including cave dwellings hewn from solid stone, uncorroded stone domes called trulli, and arches and vaults built with "ragbag patchwork technique" by the masons of Cisternino.

The book is primarily concerned with how the architectural forms came into being and how the building techniques derived from the needs of the builders.

Descriptions and text are clear, photos superb.

Lloyd Kahn

### Stone Shelters

Edward Allen

1969, 199 pp.

\$4.95 postpaid

New paper edition

The M.I.T. Press  
50 Ames Street, Room 765  
Cambridge, Massachusetts 02142

or WHOLE EARTH CATALOG

A transitional form of trullo field shelter, noncircular in plan. A main space is joined to a smaller one housing a fireplace. Such shelters are often found used to store grain in the small sketches. (Plan and section courtesy Byggkunst, redrawn by the author.)



The making of a cave is the antithesis of the usual construction process. A cave is space produced directly by the subtraction of a relatively small amount of solid material from a very large mass. A more conventional shelter, whether it be a trullo, a vaulted stone townhouse, or the reader's own dwelling, is space produced indirectly by its enclosure with pieces of solid material added together.

Trullo is a marvelous material. It is dense enough and hard enough to have served as both exterior and interior finishes, yet soft enough and fire-resistant enough to have been cut into almost any shape for any purpose. Because of the immense height, length, and thickness of the trullo's walls, great freedom of planning was possible.

## Stone Works

Stone walls & buildings. These are actually quicker than they look. It was the wool frame houses that suffered from the earthquake. Cement got no give like wood & stonework is much slower than carpentry.

Still it looks like all time and we went ahead. In planning make sure your foundation extends deeper than the frost will. Here in Maine frost here is a prime consideration for a stone building could easily be cracked to bits.

Surround the foundation with rocks of any size & type up to grade to allow for movement. Don't pack dirt in there.

As for type of rocks to build with, granite is best. Save your really square stones for corners. Stratified, waste, etc. (I don't know the geological terms) are no good. These sedimentary types are porous and the water they suck up will expand/contract and you're in trouble. If you toss it down on the pile & it shatters there are you. But don't slam it cause anything could break from that.

Use forms that get the straightest walls. Within these you can lay up vertically faster than without, but time saved is lost putting the forms together so the outside surface should be the consideration for forms. Even with forms, don't just close the eye it's a personal aesthetic.

Beautiful wall is laid up rock by rock. No other way. I worked with a mason of 60 years to learn to lay fieldstone. Practice is the way. Knowing which rock to choose from your pile. Like a puzzle with no parts the same. Choosing the wrong rock means that your work comes down on your face. (So don't be barefoot!) Also cement contains lime that burns like brimstone. Wash the stuff off before it eats your very hole. After a few weeks you'll have to wear rubber work gloves as your hands will be most tender. An old Maine stonemason told me that: "Even a round rock has a flat side if you can find it."

After building a while you'll understand this. Lay up a rock for strength always thinking of the rock that will rest atop it. Don't be cheap with the mud (cement) but learn what it's good for. Sometimes a rock will get a better bite on another when they're dry & just have cement around their edges. Like bricks only more tricky. If you decide to reveal it (build without form) stretch 2 strings down your outside dimension & learn over & sight down. When you only see one string that's your limit. Careful that a rock doesn't protrude & throw your line off. It's easy to build it too wide.

Have a large pile of rocks to choose from. Tiny to fist size stones are what you need to trip up the biggest that wobble. The little triangular shapes are best. Build a wall that rests on rocks tho, not tiny rings or cement. The old timers here built walls without any kind of mortar (I) but just skill & patience. Those walls are still solid 130 years later. So LAY UP your rocks, don't glue them up.

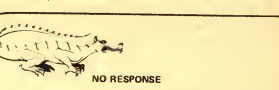
Progress right around your foundation a layer at a time so that when you come back to the starting point you'll be laying on dry or almost dry ground. This isn't possible if you're using forms. This because you have to build right up several feet & then move this whole rig down the line.

The raw material for a trullo could come from several possible sources. Loose stones from the field were one; quarried stone another. Often a large rainwater cistern or wine tank would be excavated in the rock beneath a trullo to do so, and would yield a large quantity of good building stone. In later times especially, agricultural transformations were carried out, with great expenditure of labor, to make previously unsuitable land suitable for crops. The thin topsoil would be carefully removed and piled to one side, laying bare the limestone bedrock beneath. Then the limestone would be broken out in chunks to a depth of two or three feet. The best stones would be saved for construction, and the rest replaced over the still unbroken strata of the limestone, with the coarsest pieces on the bottom and the finest on the top. Following this back-breaking procedure, red bala soil from a nearby depression would be carried to the field in baskets and tamped over the loose layers of broken limestone to a depth of fifteen or twenty inches. Finally, the original topsoil would be eagerly by the shallow topsoil and thick water would filter into these soils had reached saturation the excess water would filter into the loose bed of broken rock beneath, from which, retained by the porous bedrock, it could be slowly squeezed out of the soil and roots above when needed. This continuous bed of limestone fragments, in addition to acting as an underground reservoir, served to furnish continual organic fertilization to the soil from beneath, to complement the organic fertilizer added from above.

Sewage was distributed over the fields, working with the natural lime to increase the yield of the crops.



The masons of Cisternino were men of exceptional ingenuity. They sometimes laid up walls of regular stone blocks, but in other cases made walls by compacting irregular stones and mortar between wood forms. Their combinations of arches and vaults were often graceful and correct, but more often were brutally expensive, and were mostly naive concessions to a grace and correctness. Nothing was sacred to the mason but the sheer physical stability of what they built. A round barrel vault could be supported or spanned by cutting, twisting, tilting, or combining the standard forms of vaulting in non-standard ways.



NO DISSENT

Sad to say, however, D.R.'s clever maneuver did not have the result he was so desperate for. Estelle would have nothing to do with him when he lay down beside her. She wouldn't wake up, nor would her body respond to his as it used to do when they lay down together. D.R. shook her, and lifted her eyelids with his finger. But there was no response, except once, when he tried to hold her in his arms and she moaned and frowned and drew away to the far side of the mattress. D.R. would be so angry when she did that. He sat up in the bed and pressed his nose to his head as if his skull was about to fly apart. In his mind he showed himself a little more in which Estelle would lay on a raft while he was drowning. He swam after her but was from the Greek's incessant talk filled the sail and pushed the boat further and further away. If he could have managed it, D.R. would have sneaked back to his seat in front and been the Greek's listener again. But he knew he couldn't bring it off. His muddy mind convinced him he could never bring it off without getting caught and reprimanded by the Greek's accusing eyes. There wasn't anything to do but lie down and try to sleep.

To D.R.'s relief, sleep came almost immediately. It was about four in the afternoon now, it had been fourteen hours since he'd dropped the acid, and of course he was exhausted. His brain felt like it had been washed and hung out to dry. Sleep was the best thing that could have happened to him then, and mercifully it came. He didn't hear a word of the Greek's life story as the Greek was telling it. But later that night, deep in Oklahoma, after the Greek got out and laid D.R. good luck and farewell, D.R. took the wheel and listened to the tape of the Greek's story as he drove non-stop to St. Louis.



## Concrete Manuals

Three informative pamphlets on concrete from the Portland Cement Association:

**Consent Mason's Manual for Residential Construction** is primarily for home patios and walkways, with fundamentals on use of the transit, and instructions on finishing.

\$0.56 postpaid

**Concrete Improvements for Farm and Ranch** is a good basic instruction manual, with details on many rural applications: how to build forms, tilt-up construction, water troughs, floors, etc.

\$0.56 postpaid

**Design and Control of Concrete Mixtures** is an engineering bulletin, very detailed, on all aspects of quality control of concrete mixtures.

\$1.08 postpaid

[Suggested by Fred Richardson]

## HARDENED STATE OF LIGHTWEIGHT CONCRETE

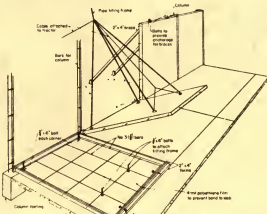
### Compressive Strength

Lightweight concrete with 28-day compressive strengths of 3,000 to 4,500 psi can generally be produced in the laboratory with cement contents of 425 to 800 lb. per cubic yard, depending on the particular lightweight aggregate being used. Certain lightweight aggregates can be used to make concretes with strengths of 7,000 to 9,000 psi and with cement contents of 565 to 940 lb. per cubic yard. The rate of strength development for lightweight concrete is approximately the same as that for normal-weight concrete.

[Design and Control of Concrete Mixtures]

Tilt-up concrete construction is accomplished by casting wall panels on a concrete floor or other relatively smooth bed and then tilting them to a vertical position. To prevent bond with the wall panel, the floor slab is covered with plastic film or a sprayed-on chemical. Wall panels are usually tilted by a tractor or other lifting equipment. The panels are braced and reinforced concrete columns are cast at the panel junctures to tie them together.

[Concrete Improvements]



[Concrete Improvements]

### Power Joint Cutter

Another method of cutting joints in concrete slabs is with an electric or gasoline-driven saw fitted with a shatterproof abrasive or diamond blade. A power cutter produces a narrow joint that minimizes the possibilities of spalling at the joint due to traffic. The joint is cut in the concrete surface 4 to 12 hours after the concrete has hardened or as soon as the concrete surface will not be torn or damaged by the saw.

[Cement Mason's Manual]

## Goldblatt Tools

An amazing catalog of specialized builder's tools. All manner of trowels and concrete tools, stiffs, brick hammers and chisels, concrete saws, scaffolds, knee pads, wheel barrows, hods, tool pouches. Good prices.

—SB

[Suggested by Robert McElroy]

## Goldblatt Trowel Trades Tools

### Free

from:  
Goldblatt Tool Co.  
511 Osage  
Kansas City, Kansas 66101



## DEEP BIT

• **DEEP & THIN GROOVERS**—Thin, deep groove prevents spike heels from cutting in pavement. These three groovers have 6" x 6" body and 1/2" x 1/2" wide bits on 1/2" radius to make grooves to code and municipal specs.  
2" Groover, 06 217 M7, \$8.30  
3 1/2" Bit Groover, 06 218 M7, \$8.80  
1 1/2" Bit Groover, 06 215 M7, \$5.30  
• **PAVER'S GROOVERS**—These are 10" x 3 1/2" heavy duty stainless steel groovers.  
1 1/2" bit, 06 217 M7, \$6.30  
3 1/2" bit, 06 218 M7, \$6.25



\$34.95

• **BRICK & TILE BARROW**—Carries up to 120 bricks. Made of rugged, seasoned hardwood for long service. The ribbed dash is adjustable. Steel wheel guard adds rigidity to this heavy-duty barrow-wide spread legs make it tip-proof, even fully loaded. Self-pneumatic tires. Bearings are self-lubricating. Weight, about 72 lbs. F.O.B. Kansas City or Harrisburg, Pa.  
11 575 R2, \$34.95



• **MORTAR HOE**—Two hole, 5 1/2" handle, 10" blade.  
07 228 M7, \$14.95

## Concrete and Masonry

For a buck this is a lot of information, especially about large-scale concrete work. Good masonry introduction not as thorough as Audels (p. 97).

—SB

## Concrete and Masonry

U.S. Army TMS-742  
1970; 200 pp.

from:  
U.S. Government Printing Office.  
Division of Public Documents  
Washington, D.C. 20402

or WHOLE EARTH CATALOG



1. Rubble masonry

### Laying Rubble Stone Masonry

Workmanship in laying stone masonry affects the economy, durability, and strength of the wall more than any other factor.

#### A. Rules for Laying

- Each stone should be laid on its broadest face.
- If appearance is to be considered, the larger stones should be placed in the lower courses. The size of the stones should gradually diminish toward the top of the wall.
- Porous stones should be moistened before being placed in mortar in order to prevent the stone from absorbing water from the mortar and thereby weakening the bond between the stone and the mortar.
- The spaces between adjoining stones should be as small as practicable and these spaces should be completely filled with mortar and smaller stones.
- If necessary to remove a stone after it has been placed upon the mortar bed, it should be lifted clear and reset.

#### B. Footing

The footing is larger than the wall itself. The largest stones should be used in it to give the greatest strength and lessen the danger of unequal settlement. The footing stones should be as long as the footing is wide, if possible. The footing stones should be laid in a mortar bed about 2 inches deep and all space between the stones filled with mortar and smaller stones.

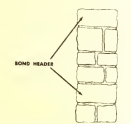


Figure 1-1. Rubble masonry and footing footing stone

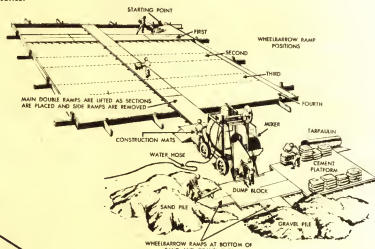


Figure 1-1. Typical organization of masonry equipment and materials.

## Free Wood Construction Details

On page 25 of your Spring 1970 Catalog you have listed the American Plywood Association. You might also try listing:

- 1) American Wood Preservers Institute  
2600 Virginia Ave. NW  
Washington, DC 20037
- 2) National Forest Products Association.  
1619 Massachusetts Ave. NW  
Washington DC 20036
- 3) Southern Forest Products Association  
P.O. Box 52468  
New Orleans Louisiana 70150

All three of these non-profit (run by the industries) organizations will send free pamphlets on a very wide range of subjects hoping that you will buy their product. The pamphlets are magazine size and made from the same kind of paper.

Your readers might be interested. I would have been and I am a reader.

Thank you  
James A. Webb  
Coral Gables, Florida

◆◆◆◆◆

## Free Lumber, Hardware, Etc.

Many mills in Northern Calif. Being closed down in areas that have been logged out. Mill buildings made of redwood, heavy timbers, corrugated tin can be gotten for the effort of dismantling & hauling away. We built two small houses that way with a little help from our friends. Glass for windows from wrecked V.W. Buses.

Best Wishes  
Steve Jordan  
The Sea Ranch, CA

## Concrete Boatbuilding

Ferro cement is a super strong  $\frac{1}{4}$ " thick fireproof material used for boat hulls, consisting of a mixture of sand and cement plastered over a wire framework. It is cheaper and faster than conventional boat-building techniques and very few special tools are needed. This is a textbook on building a ferro cement boat where the authors share details of their considerable experience. There is a fine concise section on how to build, and chapters on reinforcing, mortar mixing, and finish work.

Ferro cement should work well on land... let us know if you hear of any F. C. domes.

Lloyd Kahn



**Concrete Boatbuilding**  
Its Technique and Its Future  
Lloyd Kahn  
W. Morley Sutherland

\$9.95 postpaid

from:  
John de Graaf, Inc.  
34 Oak Street  
Tuckahoe, New York 10707

or WHOLE EARTH CATALOG

(a) A rough and ready rowboat can be built from beach sand and cement as follows. Although not in the best tradition of ferro-cement, the form of construction is beautifully simple and inexpensive. It could conceivably have a military application.

(b) First form a mould of damp beach sand. Mix in a little fast setting cement for the outer layer. Cover with polythene cut and taped where needed.

(c) Next cover with approximately four layers of  $\frac{1}{4}$ " chicken netting. Wire tie at overlaps and hold at gunwale with a band of No. 8 fencing wire. Additional bands of fencing wire over the hull add stiffness. Wire mesh to these.

(d) Finally plaster with beach sand and quick setting cement mixed 2 to 1 with a minimum of water. Plaster layer of approximately  $\frac{3}{4}$ " thickening to an inch at the gunwale, more at the keel. After two days, lift hull from mould, patch up inside and where possible sink boat to cure concrete for a few days.

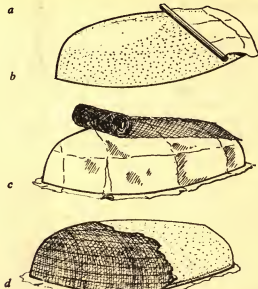
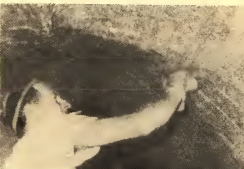
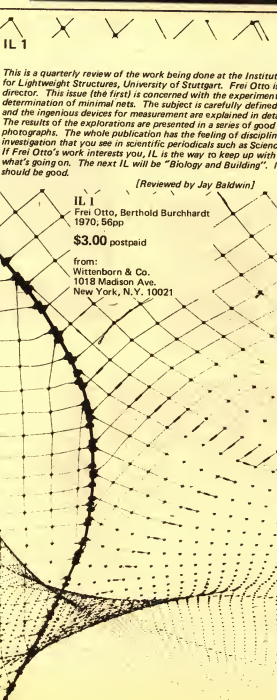


Fig. 10—Shoestring rowboat

## Tongue-in-Groove Bricks

Good design on an old idea: stacking blocks—concrete, with grooves and ridges which lock the whole thing together. No mortar required, since everything interlocks. Also makes the blocks reusable. If you move—take your house apart and move it with you. Blocks are sold by franchised dealers of Wedge-Block, Inc. 10430 Garibaldi, St. Louis 63131 but the molds for do-it-yourself should be simple to make.

Tom Cryar  
Pittsburgh, Pa.



This is a quarterly review of the work being done at the Institute for Lightweight Structures, University of Stuttgart. Frei Otto is director. This issue (the first) is concerned with the experimental determination of minimal nets. The subject is carefully defined, and the ingenious devices for measurement are explained in detail. The results of the explorations are presented in a series of good photographs. The whole publication has the feeling of disciplined investigation that you see in scientific periodicals such as Science. If Frei Otto's work interests you, IL is the way to keep up with what's going on. The next IL will be "Biology and Building". It should be good.

[Reviewed by Jay Baldwin]

IL 1  
Frei Otto, Berthold Burchardt  
1970, 56pp

\$3.00 postpaid

from:  
Wittenborn & Co.  
1018 Madison Ave.  
New York, N.Y. 10021

## Stack Sacks

Between adobe bricks and formed concrete walls is this other way. You take gunny sack halves, sew them into narrow bags, fill them with sand and some concrete, stack the dry bags up like bricks, pour rebar down through the bags, frame doorways and such with rebar, then wet the whole wall with a hose or a rainstorm, let cure, put on the roof (maybe with wet-concrete-dipped gunny sacks for shingles). Trowel on wet concrete for a smooth wall if you want it.

According to Holly Baer, who told us, the main source of information is:

Dicker Stack Sack International  
2600 Fairmont Street  
Dallas, Texas 75201

They are getting a patent on the device that turns out filled bags. Apparently local franchises can deliver an order of stack sacks to your door. Some people dip them in water, then place them wet.



## THE GREEK'S LIFE STORY

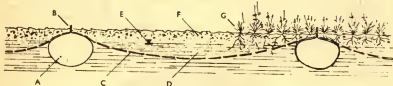
Before I tell my life story I want to explain where I'm going, and why. My destination is Norman, Oklahoma. I used to be a student at the state university in Norman, and I'm on my way there now to destroy a certain manuscript that I wrote and left there in the library, for posterity. I didn't have any way of realizing it at the time, but leaving that manuscript behind on that campus was one of the worst mistakes I've made in a lifetime filled with mistakes, and the most important thing I have to do at this point in my life is correct that mistake by getting hold of the manuscript and destroying it.

It's got to be destroyed because the story of my life from 1930 to 1955 is told on those pages. Except for that record, that whole early phase of my life is totally lost to memory. I don't remember anything that's in the manuscript, and I've forgotten the name of the person that manuscript is about. It's taken me fifteen years of constant labor to arrive at my present state of mind and I'm proud of that achievement. Yet I can't relax in my condition of forgetfulness because I know that one glimpse at that manuscript would bring it all back again, and my efforts these last years would all have been for nothing. I realize it's pretty unlikely that I would ever accidentally find myself reading the manuscript. There's only the one copy, gathering dust all these years in the stacks of the University library. But as long as that manuscript exists, intact, the possibility exists that I might see it, and I am haunted by that possibility. The very worst thing that could happen to me is to have the knowledge of my early life re-imprinted in my mind.

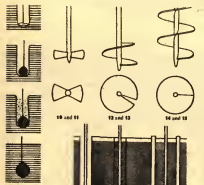
(continued)



The only pavilion of Expo 67 more beautiful than Fuller's U.S. Dome was the West German tent, designed by Frei Otto. He is currently the master of structures whose flexible skin is the prime structural element. Volume One of his 2-volume work is devoted to Pneumatic Structures—air houses plus. Every designer we know who's seen this book has commenced to giggle and point, jump up and down, and launch into enthusiastic endorsement of Otto, design, being a designer, and look at this here. The book is comprehensive in its field, technically thorough, beautifully presented.



Small floating balloons may carry fertile soil in nets or perforated foils.



\* The best way of retaining the spherical shape is by means of water. This shows a floating steel balloon, retained and centered by a hose.

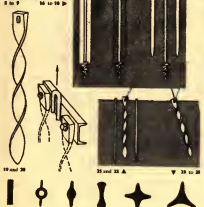


Figure 9 is a section through a greenhouse set on sandy soil and covered by a transparent membrane with internal drainage. A membrane is also laid beneath the humus layer, and is positively connected with the roof membrane

The humus layer thus forms a simple anchoring weight

The floor membrane simultaneously permits moisture control of the soil.

The roofing of such cultivations by pneumatically tensed membranes with internal drainage is seen from the side in Fig. 10. A net of small open mesh floats on the water and carries the humus layer; it is supported both by inflated balloons and by the roof membrane itself which spans the floating fields and is immersed to a depth of approximately 15 cm at the edges.

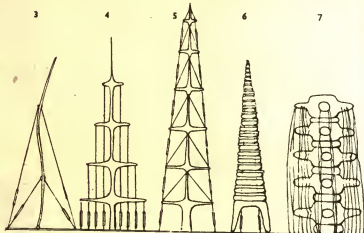


**Tensile Structures, Vol. One**  
Pneumatic Structures  
Frei Otto  
1967; 320 pp.  
1660 illustrations  
**\$22.50** postpaid

**Tensile Structures, Vol. Two  
Cables, Nets and Membranes**  
Frei Otto  
1969; 171 pp.  
**\$12.50** postpaid

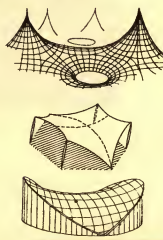
both from:  
The M. I. T. Press  
50 Amas Street  
Cambridge, Mass. 02142

or **WHOLE EARTH CATALOG**



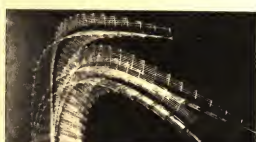
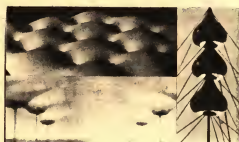
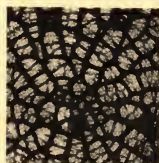
Guyed masts consist of one-dimensional central elements subjected to compression and surrounded on all sides by one- or two-dimensional tension-loaded elements. They thus form three-dimensional systems most suitable for mobile structures. Many contemporary designs of high cranes for wide reaches are variations of this basic system. An elastic central rod can be bent by varying the length of the guys (Fig. 3). For this, all cables must be adjusted simultaneously; this is done by synchronized hydraulic presses located at the anchoring point. A similar, but much more mobile system is shown in Fig. 4. A thin elastic central strut carries cantilevers connected to the ground by means of cables.

In living nature the spine of a vertebrate (Fig. 7) is a guyed mobile system, approximately as shown in Fig. 4. A multiple articulated, highly flexible central rod, capable of taking up large compressive forces, is surrounded by a tension-loaded system consisting of many members, which secures the central rod against buckling and bending, while ensuring its complete mobility.



This is a comprehensive collection of the stretched membrane and pneumatic structures made or proposed by Frei Otto and his friends from 1953 to 1967. The many projects actually done or modelled are shown in photographs (many rather dark). Proposals, and explanations of the structures are shown in drawings and diagrams. The text explains things 'in a non-technical language. The math is not discussed. There are a number of structures shown that were news to me, and as usual they excited me a lot. Can you dig a dam made of cables and a membrane? Tension structures are economical and graceful, and we will probably be seeing a lot of them soon. If you want to understand them, this book is a good place to start. It's claimed to be the only single volume collection printed in English. The price is something else.

[Reviewed by Jay Baldwin]



For roofs over large areas it is usually necessary to employ structures of relatively low height. Because of the large radius of curvature, large-span pneumatic domes of low "rise" have high membrane stresses. If, on the other hand, the membrane is anchored to the ground and the dome is raised up to the interior, then the span, the radius, and also at one or more points in the interior, the membrane stresses are reduced. While retaining the same average height, pneumatic roof structures with low points can be extended to large areas. This is among the most economical structures for covering large areas and is also the most suitable for the construction of structures which they span, inasmuch as tension anchorages may be given any desired length and be formed in all manner of soils and even under water. Pneumatic roof surfaces have to discharge their rainwater at the low points. This can be done in a number of ways, for example, conceivable also as vertical or steeply sloping wall surfaces.



**\$22.50** postpaid

from:  
Praeger Publishers, Inc.  
111 Fourth Ave.  
New York, N.Y. 10003

or **WHOLE EARTH CATALOG**

## Inflatocookbook

An inflatable is an event, like circus tents used to be. Dogs bark, kids gather, old ladies get up tight, cops drift by, youths take off their clothes. Inflatables are trippy, cheap, light, imaginative space not architecture at all. They're terrible to work in. The blazing redundant surfaces disorient; one wallows in space. When the sun goes behind a cloud you cease cooking and immediately start freezing (insulation schemes are in the works). Environmentally, what an inflatable is best at is protecting you from a gentle rain. Wind wants to take the structure with it across the country, so you get into heavy anchoring operations.

To give inflatables their well-earned due, they are wonderful recreational structures. High and scary but thoroughly safe. Like an immense water bed, or slow-motion trampoline, or squishy mountain. Person-filing giddiness maker.

This book of Ant Farm's has all the basic design and materials information to puff up your own dream sky hill.

—SB

## Inflatocookbook

\$3.00 (includes forthcoming Supplement)

FROM:  
ANT FARM  
247 Gate 5 Road  
Sausalito, California 94965

OR WHOLE EARTH CATALOG

If your inflatable is going to be up outdoors in any wind, it will need an anchoring system. For small volume (500 cu. ft. of air) or interior tent-like structures should work; these could be sand bags or water bags. Larger structures require heavier anchoring. There are a number of ways of doing it: integrally made tie downs, buried edge, weighted edges, taped edge, or tension net anchors. Buried edge is good for a semi-permanent installation where you can dig a trench. A taped edge is good for a small installation on a smooth floor; tie downs and tension nets are good for sites with existing things to tie to (trees, fire hydrants), or where it would be easy to drive tent stakes or augers.

The anchoring system must withstand not only windloading but also the internal air pressure of the structure. Precise structural calculations should be sent to 2 engineers, 3 P.D. mathematicians, and a computer, but a little rough math can give you a close enough estimate of what anchors to use. We will deal first with inflation pressure and second with wind loads.

## Products for Inflatables



Roberts Valves Catalog  
Hulley-Roberts Corporation  
Spring Valley Avenue  
Paramus, New Jersey 07652

The valves for small inflatables—cheap, hi-tech like 4¢ apiece. The 600 KD is an airtight valve that goes on with a brass grommet & steel pressure die, i.e., no heatseal. The die costs \$17; it works fine in an arbor press, OK with hammer. Vacuum cleaner tube goes over outside of valve

Smith-Dixie Industrial Fabrics  
North Side Drive  
Box 1203  
Statesville, North Carolina

Catalog has sample swatches. New & second, 8 government reject, vinyl-coated nylon fabrics at good prices. A small company, I haven't ordered yet, but people I've talked to seem pleased with their service.

Love & Peace to all  
Charles Tifford  
New York, N.Y.

## Vinyl Cements

I have been developing a portable, collapsible, insulated shelter in which I have been using a nylon reinforced vinyl requiring a suitable adhesive.

I would like to advise the person who refers to himself as the "Vigilant" in Pax River, Maryland that Bostik Adhesive Specialists, a subsidiary of USM Corp. in Middleton, Mass., produces an excellent adhesive for vinyl. It is referred to as 4067 a nitrile rubber base adhesive and 7130, a synthetic resin base. Both are excellent and are often used industrially for vinyl inflatables.

James W. Smith  
Providence, R.I.



**40' VINYL PILLOW** Dielectrically welded vinyl pillow with double blowers, net, and earth-ugner anchors. 2 doors, variety of colors and weight vinyl. \$2,000-2,500. Rents for \$150/day. Other sizes and shapes (see pentapuu) made to order.



## The Latest Inflatables

Here's what we've been doing with inflatables recently—at the Media Conference at Goddard, many of us (Cosmic Labs, South coast) lived in poly bubbles in the woods (500' extension cord) and stayed dry through three days of rain. Very functional and nice.

I've been doing a series of Water-Bubbles for the NYC Parks Department. Their Festive Truck goes to street fairs and provides stage, PA, lights, and Bubbles. We lay down the red carpet (non-sovereign polypropylene, \$1.75/yard, from Dixie Corp.) inflate a 2000 16 gauge vinyl bubbles with 5000 CFM blower mounted on the truck, tie the anchor ropes to parking meters, life poles, fire hydrants, etc., attach 1" hose to fire hydrant G-3-way distribution system—one to overhead sprinkler hoses, one to floor sprinkler hoses, one to 4-way direct spray. Add 150 balloons, cowbells, claves, tambourines—and turn the kids loose inside. They really give it a workout—the carpet protects the bubbles and the kids when they slide and fall. I try to get them involved in putting it up and down. Some, some don't. The first model was in 8 gauge vinyl—it almost worked, but would usually rip after a few hours. I really hate to tell them "Don't...". I think the new model will take about anything except knives. Even in Hunt's Point and Lower East Side, no knives attacked it.

Now we're in Columbia Maryland working on the Antipack project to put this camp in a 1-acre inflatable using the Goodyear system—12 gauge vinyl reinforced with steel cables with internal strain-gage points. The site slopes 15%. We'll do earthwork—direct ramming and CIVIL Ram—to form an earth berm and interior supports. Probably also have foamed interior structures. South coast is here working on a prototype. Some hassles in zoning, air conditioning, financing—we're working on a grant from Educational Facilities Lab, (Ford Foundation). Project has a fairly high reality—fed about it. I'm working on getting the vinyl metalized—to cut down heat gain. Maybe put silver mylar on the vinyl. The structure will have a double skin for insulation. This makes some problems on duct connections. But it opens up the possibility of sculpting the "ceiling" at will by varying the skin spacing. Goodyear is opening up their research department to us. The whole thing is an order of magnitude of complexity higher than the poly bubbles. But it's still more and better for less.

## FINE tape source:

Brita Custom Tapes  
Foot of Farm Road  
Secaucus, New Jersey  
Phone 201-86-43131

My Zynler has been most cooperative and friendly. The tape we usually buy is 5 mil vinyl, \$1.21 per inch of width for 36 yard rolls, in many colors, all good (red, yellow, blue, green, white, black, orange, and others) in case lots. He'll sell as few rolls as you need—15% more for less than a case—just service—2 days by UPS in NYC area, and ship by air. The tape can be cut in any width. I've been ordering 3" and taping both sides, for heavy-use stuff.

## A source for screw-in earth anchors:

Jerry Alence  
New Brunswick, New Jersey

\$6.15 for an 8" helix on 1" x 6" shaft, will hold 10,000 lbs in normal soil.

Charles Tifford  
Inflation/entomologist

## WARNING: FUNKY GENERATORS EAT FAN MOTORS



A dit cut across  
the wrinkles will  
tend to spread  
open and leak.  
air.  
Not recommended



The personal history that's still alive in my memory begins when I was twenty-two. When I was twenty-two I thought that what I wanted more than anything in all the world was to be a scholar, a student of literature, an expert on the metaphysical poets with particular emphasis on John Donne. I had a bachelor's degree but that didn't seem like enough. I felt like I'd got that degree without ever really reading anything, without ever really learning to read. I wanted to read, to study, to experience the words of the masters. It seemed like such a simple thing. The library, the department, the lectures, all were images of utmost quiet and tranquility to me then, and I wanted nothing more than to be quiet, to read and write and think, to live the classic life of the mind right here in the middle of the Twentieth Century.

Graduate school was good the first year. I did okay in the classes, and I was into some personal writing that satisfied me. I didn't take myself seriously as a writer, you understand. But I enjoyed it, it was expression, and I felt like I had a whole lot to express. I remember writing a short story about a flower, a daffodil that learned how to sing. Every afternoon the daffodil would give a concert for all the other flowers in the meadow.

The story was published in the campus literature magazine and a lot of people told me they thought it was pretty good.

The problem with my career as a scholar was the Master's Thesis. I did well in the lecture courses and seminars, but I just couldn't hack that thesis. The reason couldn't be that it was I really didn't want to write a thesis. I'd sit down and try to write about the metaphysical poets and every time I'd wind up saying stuff about myself. I worked over a year on that paper, and when I'd finished I had three hundred pages that simply told my life story from birth through graduate school. Of course I knew the professors wouldn't accept the manuscript as a thesis, so what I did was have it typed up professionally, and bound to look like all the other theses on the shelf. And one day I sneaked into the stacks and when nobody was looking I slipped it up on the shelf and left it there. Then a few weeks later I left the University, I left Norman altogether and entered the next phase of my life's adventure.

(continued)

Inflatables  
Shelter

107



## Plastics for Architects and Builders

Whereas architects and builders are comfortably familiar with the "classic" building materials that come more or less directly from nature, plastics, with so many complicated names and such complex manufacturing processes, have not been as readily understood.

Most books on plastics are by and for specialists. Here, however, is a primer on plastics, clear and orderly, that gives the builder, designer, or architect enough basic knowledge to begin thinking of design with the new sophisticated materials.

It begins with a simple description of the molecular structure of plastics—one of the principal keys to their behavior. Once the designer understands this, he is ready to begin exploring the array of materials available.

Then there is basic information, pictures, many drawings on the properties, end-use applications, composites, and manufacturing processes. The designer can then begin to understand what plastics can & cannot do.

—Lloyd Kahn

### Plastics for Architects and Builders

Albert G. H. Dietz  
1969, 129 pp.

\$7.95 postpaid

from:  
The M. I. T. Press  
80 Ames Street, Room 765  
Cambridge, Mass. 02142

or WHOLE EARTH CATALOG

There is no escaping the conclusion that design with plastics is design at a sophisticated level.

**Light Transmission:** This structural plastics can transmit a high percentage of incident light, thus providing structure, enclosure, and illumination—a combination unique among structural materials.



## Plastics in Building

With all the sealants, plastic pipes, foams and the like coming into prominence in the building industry, it's handy to have a book like this, which describes the properties and characteristics of the many plastic materials now in use.

There is introductory information on reinforced plastic shell structures, adhesives, roofs, coatings, and reports on the use of plastics in other countries.

—Lloyd Kahn

Both the plastics chemist and the architect are designers of structures. The architect builds with units that the eye can see and the hand can weigh. The chemist's building blocks are tiny molecules, far smaller than one-millionth of an inch, which he strings together to make aggregates called polymers. These little chains, barely discernible by electron microscope, are entwined and sometimes tied together to give us the plastics.

### Sprayup (Figure 5-11)

The sprayup process lends itself particularly well to the manufacture of large structural polymer-based panels. In this process, chopped fibers and resin are deposited simultaneously against a mold surface. The unit used for this deposition consists of a chopper and dual spray nozzles. Continuous strand is fed into the chopper where it is cut to length. Fiber length can be varied from about ½ to 2 inches. (The longer fibers are desirable for structural panels because they impart higher mechanical properties.) The panels become fed into the mouth of the dual spray nozzles. Separate reservoirs supply one nozzle with catalyzed resin and the second nozzle with accelerated resin. The resin formulation is tailored such that neither component is highly reactive and therefore, each may remain in the reservoirs for at least several hours. When the products leave the dual elements of the spray gun, they interact and interpenetrate, and pick up the chopped fibers before striking the mold. The resin mixture is then ready to cure at a convenient rate as predetermined by the concentration of catalyst and accelerator.

### Plastics in Building

Irving Skeist, Ed.  
1966, 466 pp.

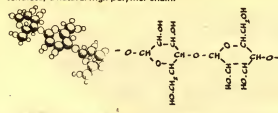
\$20.00 postpaid

from:  
Van Nostrand-Reinhold  
450 East 53rd Street  
New York, N.Y. 10001

or WHOLE EARTH CATALOG

Fig. 8B-2. Sandwich panel with honeycomb core.

**Cellulose:** One class of chain polymers is made by modifying cellulose, a natural high-polymer chain:



Various acids will react at the OH points of the cellulose to give a series of "esters" (the organic analogue of salts in inorganic chemistry). The oldest is cellulose nitrate, often thought of as originating the plastics industry when first proposed for billiard balls to save the African elephants from decimation for their ivory.

**Stabilizers:** Plain plastics, such as polyethylene pipe or polyvinyl chloride sheet, may degrade when exposed to some elements such as sunlight. They must therefore be fortified by stabilizers, such as ultraviolet absorbers and antioxidants. Carbon black, for example, converts polyethylene from a quickly degrading material to one that stands up extremely well to sunlight and general weathering. Other stabilizers accomplish their purpose without necessarily coloring or stabilizing plastic for a particular purpose unless it is inherently stable. The subject is far too complex to be treated here. The architect should insist upon assurance that the plastic will have the necessary life for his application.

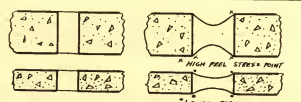
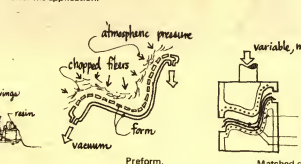


Fig. 10-4. Effect of joint shape on necking.

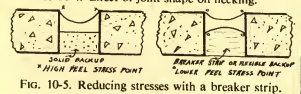


Fig. 10-5. Reducing stresses with a breaker strip.

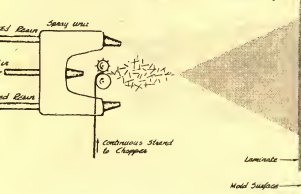


Fig. 5-11. Schematic of sprayup process.

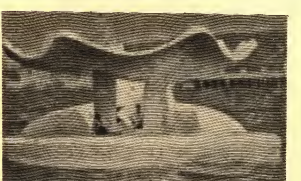
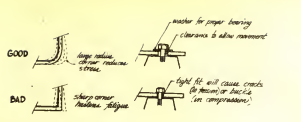


Fig. 21-10. Floating bathing place of foam-filled reinforced plastics. (Courtesy Bath Academy of Art)



### Thermal Response

**Expansion and Contraction:** Like all building materials, plastics expand and contract with rising and falling temperatures, but for many plastics the extent of change is substantially larger than for many other building materials. Allowances in design must therefore be made for these dimensional changes, either by accommodating them in the shape of the component or by providing expansion joints. A curved section, for example, may bulge or flatten slightly without affecting its usefulness. Framing around glazing should allow room for expansion and contraction, and the sealants employed should accommodate such motion.

**Design:** Expansion and contraction can lead to severe stresses at sharp bends or at points of restraint, such as tight bolts and pins. Repeated stresses caused by temperature changes can lead to fatigue, cracking, and failure. Generous radii and fillets should therefore be provided, and holes for fastenings should be large enough to allow for movement with changing temperatures. Restrained flat surfaces may wrinkle upon expanding and in extreme cases may crack or tear upon contracting. Curved or folded surfaces, properly designed, overcome these problems.



### JOINT SHAPES

The shape of the joint has considerable effect on the success of the joint sealant. As a joint moves, stresses are imposed on the sealant that may be more or less severe, depending on the nature or original shape of the joint. The deeper a sealant is in a given joint for a given width, the more "necking" and internal stress occur in the sealant as the joint opens. As is seen in Figure 10-4 a joint ½ inch wide X 1 inch deep "necks" and internal stress occurs itself far more than a joint ½ inch wide X ½ inch deep. Consequently, there is a greater chance for cohesive failure with the deeper joint. A similar problem is solved when a sealant is used in a joint in which there is no breaker strip at the bottom or back of the joint, so that the sealant is in contact with three sides of the joint with only the face of the joint exposed. This, again, puts a greater strain on the cohesive strength of the sealant. The obvious recommendation here is to provide an breaker strip or type of backing which will not restrict or restrain the sealant, but will move with it as the joint moves (Figure 10-5).

Shrinkage is another characteristic whose importance varies with the use of the sealant. If the sealant is applied in a corner joint as a filler, shrinkage actually may be desirable in order to have the joint become concave. On the other hand, a sealant put in the ½-inch joint between two adjacent porcelain enamel panels cannot have excessive shrinkage or it will shrink into the joint providing an unsatisfactory appearance and also reducing the amount of sealant in the joint, possibly to an unsatisfactory amount. Sealants are available with shrinkage rates ranging from practically 0 to 50 per cent. If a very low order of shrinkage is required, a two-part chemically cured compound will provide shrinkages in the order of 0 to 2 per cent. If a modest amount of shrinkage is permissible and other characteristics unique in the compound are desired, solvent-based compounds are available with shrinkages ranging from 10 to 20 per cent. For certain applications, sealants with 40 to 50 per cent solvent, providing about that amount of shrinkage eventually, are the entirely satisfactory, e.g., for needle glazing and other small joints where a concave finished joint is not harmful.

Several plastic coatings, including epoxies, urethanes and polyesters, have established themselves as extremely durable surfaces with excellent bonding characteristics. These coatings form their films by chemical action rather than oxidation or evaporation as in the case of the paints. A urethane coating was used for the car shelter and breezeway panels of the South Bend House. This two-part system promises excellent weather resistance and color retention. One clear coat of the formulation was plant applied during fabrication of the sandwich panels. After the initial color coat was mixed and brush applied at the site, an additional coat which contained a pure silica sand for texturing finished the surfaces. The coating has performed well and appears to be particularly able to conceal plywood grain raising and checking.

Fig. 19A-3. Extruded vinyl waterstop. (Courtesy Cementa A.S. Copenhagen, Denmark.)

A remarkably designed extruded vinyl (Figure 19A-3) waterstop is being used as a peripheral insulation. The diamond-shaped center portion serves as a mechanical spring. When the concrete expands, the diamond colligates within the concrete and in the diamond expands pushing the film tightly into position.

## Structural Potential of Foam

Plastic foams are entering the building industry. Shot from guns, poured into molds, or vacuum formed, foam is produced by mixing two liquids which expand to form the cellular structure.

Recent technological advances with urethane foams in application, fabrication, and product control have led to the current wave of experimentation. Designers such as Douglas Deeds and Felix Drury are working on structural applications of foam, hoping to achieve free-form buildings.

Equipment for spraying is expensive: a foam rig is \$1,500-7,000, and foam itself runs about 10¢ per board foot (1" x 12", one inch thick). If you're doing your own application, and buying bulk materials, its biggest applications now are in roofing and as insulation.

This book describes a government sponsored project to determine the potential use of foam for housing in underdeveloped areas. It may well be that building codes, unions, lumber lobby interests, etc., will hold up foam development in the U.S., and that the real advances will be made in other countries. Details are given here on several years of testing various structural applications of polystyrene and polyurethane foams. There are pictures, construction details, drawings, graphs and charts on test results. Since this work was done several years ago, recent improvements in foams may have superseded some of the conclusions.

—Lloyd Kahn

[Suggested by Ron Brooks & Ron Swenson]

## Architectural Research on Structural Potential of Foam Plastics for Housing

Underdeveloped Areas  
Architectural Research Lab.  
1966, 224 pp.

\$5.00 plus postage from:

Publication Distribution Service  
University of Michigan  
615 East University  
Ann Arbor, Michigan 48106

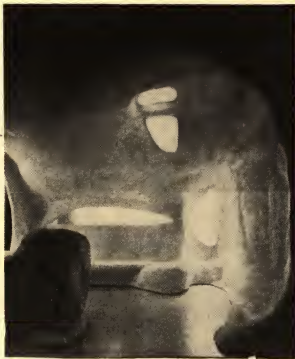
It is clearly to the interest of the plastic industry in the United States to enter the housing field on such a global scale. As the section on marketing aspects brings out, the industry is caught in a squeeze between steadily increasing surplus production capacities and a falling price for the basic chemicals. Housing looms as a most attractive mass market—chemicals would be bought by the ton, not just by the pound—but attempts to penetrate the housing field in the United States have been frustrated because of local building code restrictions and the opposition of established interests in the conventional way of building. In entering the housing field, the plastics producers will find better opportunities for success if initially they turn to the emerging countries where the building codes are less restrictive (if indeed they exist at all) and where there is consequently more freedom to develop a new kind of building industry.

All the shells were coated with liquid elastomer before being exposed to the weather. Two approaches were used. One was the use of the two-coat system, neoprene and Hypalon, and the other the use of two coats of Hypalon.

The shells were moved to the site by rolling each one like a giant wheel.

The shell was suspended and loaded with 20 lb sand bags to simulate uniform loading.

Petroleum is becoming increasingly the raw material for plastics intermediates.



Office room transformed into grotto by designer Douglas Deeds, San Diego. Deeds built foam up in layers, as coils of clay are used to form a pot.

Vacuum forming: ABS foam, marketed by U.S. Rubber Co. under the name "Expanded Royaltite" in sheet form is clamped in a stonery frame, heated, and then drawn into a female mold by vacuum....

The fewer the joints, the fewer are the problems the structure will have to face...lightness in structures can lead to special problems of anchorage.

The cellular plastics admittedly have certain technical limitations. For instance, they have a low moduli of elasticity and high creep characteristics. These properties definitely restrict the way they can be formed or shaped, if they are to be used as independent structural materials.

Closed cell foam plastics offer excellent thermal insulation (with K-factors usually varying from 0.12 to 0.30) low water absorption and low moisture permeability.

Plastic materials, particularly the foam plastics, unquestionably have a high potential for housing use in developing areas of the world. Spray techniques have good possibilities for the construction of total structures using either air-injected structures or lightweight armatures as form work; the present crude experience of sprayed foam products can be overcome by mechanizing the spray gun or by using extremely skilled operators.

## Plastic Hinges

This tough hinge was flexed 1,000,000 times without breaking. Comes in rolls, about 30¢ per foot. Fact sheet "Polyhinge" from:



Stokes Molded Products  
75 Taylor Street  
Trenton, N.J. 08604

## Lock and Key Extrusion

A simple way to install glass or plastic windows in wood or metal panels. Information from:



Also Rubber & Plastics Corp.  
830 Malcolm Road  
Burlington, CA



## Foam Guns

Guns and pumping apparatus for epoxy, urethane foam, elastomers and silicon. Information from:



W. E. Muehle Co.  
725 Bryant Street  
San Francisco, CA 94107



Low-cost, small-job home foam dispensers.

## Foam Design

Deeds Design Associates  
1706 West Arbor Drive  
San Diego, CA 92103

## Construction Bargaineer

Just like Rock and Dirt (p. 71). Heavy equipment, used and surplus.

—SB

## Construction Bargaineer

\$5 (yr 24 issues)

from:  
The Construction Bargaineer  
P.O. Box 1061  
St. Paul, Minnesota 55105

## CARGO

### TRAILERS

#### 2 WHEEL

5000# Cap. Metal Body w/offset & Rear Drop Gate Air over Hyd. Brakes - 110x20 or 90x20, 12 ply Tires - Front Center Body Gm. 110" L x 74" W. Wt. 2300# Excellent... \$139



## 4 x 4 PICK UP

### 3/4 TON

Similar to a Jeep but twice the size!

Very Low Miles - Excellent

SPECIAL! White Quantity Limited... \$1,250.00

REO 6 x 6 w/AUGERS  
6 Avail  
Good Oper. Condition \$4,500



## Adhesive Engineering Company

these guys are doing what construction people never figured could be done, they take structures like collapsed concrete bridges, jack them back into place, inject some adhesive, and the bridge is stronger than before it collapsed. They print a pamphlet called Construction Adhesives Coatings and Sealants, and they provide information and survey to about every possible application of industrial gluing. alan kalker suggested it, through heri grubb, alan's idea was that there might be an application here for prepacked concrete dome sections, just pour the sections, hoist them in place, and stick them together.

—jd

## Information

### free

from:  
Adhesive Engineering Company  
1411 Industrial Road  
San Carlos, California 94070



For the first time in my life I began living without a plan. Time and space went out of my mind as concepts as I worked to let go of every memory of my early life. It was a period of wandering, alone, traveling light, sometimes with only a pack on my back, hitch-hiking when I was broke, driving old cars when I could afford to buy them. I went to live the old car life, I fell apart, then hitch-hike again till I got enough money together to buy another old car. It was insane a lot in those days. Half the insanity of my life came from watching my cars fall apart around me, and being unable to fix them. And yet, it was fascinating. I learned much from the experience of those cars. Those cars gave me my first important insights into how all things are made of separate parts, and how those parts come together as wholes. I'd buy a car and drive it thinking that I had bought one thing and then go crazy when it would turn out I hadn't bought one thing at all, but a hundred things, a thousand things that had to fit and work together or they couldn't work at all. Fuel pumps, water pumps, head gaskets, oil filters, coils, tires, tubes, king pins, bushings, rocker arms, brake linings, horns, lights, steering wheels, transmission systems, a thousand parts that needed oil and grease and special measuring of lengths end widths and timings in between.

I couldn't cope with that realization at first. There were times when a fuel pump would go out and I could think to do it was walk away, just abandon the entire car. I had no mechanical skill, and no patience to learn any. As I brooded about this idea, as the long living of broken cars forced me, I literally digress me into this painful experience of the separate parts of machines. I began to see how everything is made up of parts, how the whole world, the whole cosmos is nothing but an incredibly large heap of parts. And it was then that I went truly crazy. For if all that the world was a heap of parts, then where was the guarantee that all those parts would keep on working? Where was the guarantee that the one necessary part that held it all together, the screw or the pump or the axle or the philosophical theory the world just had to have to keep going, was not going to break or wear out or get lost at precisely the moment the world needed it the most?

I think the insight that finally broke me and made me voiceless, took away my my power to utter words, was the recognition that language itself is made of parts, little bits and pieces we call vowels and consonants, verbs, nouns, adjectives, conjunctions, the parts of speech, you see.

The Parts!

(continued)



**MATERIALS.** This is page 86 from Domebook 2. (See p. 93). Thank you Lloyd.

## RIGID SKIN MATERIAL.

Fome-Cor board, type 327W, 200" thick flat sandwich laminate of uniaxial polyethylene foam between 2 layers of paperboard. 4" X 8" sheets \$5 per sheet in 20-sheet quantities, \$3 in 200-sheet quantities. Brochure Fome-Cor Board's tech bulletin No. 6113A:

Fome-Cor Board  
Type 327W  
Monsanto Company  
200 N. 8th St.  
Kenilworth, New Jersey 07033

Steel foil corrugated board (up to 70" width) being produced in widths 30", 34", lengths 24" & 36", with larger sizes available on special order. Cost about \$80 per thousand sq ft. This company is experienced at scoring, slotting, joining techniques and can do same in plants with sufficient equipment; ask for sample:

First Container Corporation  
Box 303  
Fort Worth, Texas 76101  
Attn: Don S. Lerman, President

Fiberglass structural panels-doors, skylights:

## PLEASE SEND FOR PAMPHLET.

Sanstruction  
702 North Bend Rd.  
Cincinnati, Ohio 45224

Silicone coated plywood—architectural specs and application instructions from:

Weyerhaeuser Company  
Box 6  
Tacoma, Washington 98401

Glass reinforced thermoplastic sheet "Azdel"—very strong, developed for autos:

G. R. T. L. Company  
No. 1 Gateway Center  
Pittsburgh, Pennsylvania 15222

Reinforced acrylic structural sheets, tensile strength 12,000 psi. Information from:

American Acrylic Corporation  
173 Marine Street  
Farmington, Long Island, New York 11735

Rigid vinyl—fascinating brochure from Goodrich, "Designing with Rigid Vinyl." Comes in rods, extruded shapes, pipe, sheets and molded shapes. Sheets come in thicknesses from a few mils to several inches, many colors, and can be heat-welded with hot-air guns. You might be able to weld together a dome membrane at triangles' edges:

8. F. Goodrich Chemical Company  
3135 Euclid Avenue  
Cleveland, Ohio 44115

Acrylic Plastic sheet, Kydex 100, Kydex 5,000, resistant to ultraviolet. Technical data from:

Rohm and Haas Company  
Independence Mall West  
Philadelphia, Pennsylvania 19015

Teflon, Plexiglas, fiberglass, Mylar, vinyl, foam guns, etc. A complete catalog of plastic materials and prices:

Plasticraft, Incorporated  
2800 North Spivey  
Denver, Colorado 80211

Best plywood for domes: Durally flat panel siding is exterior Douglas Fir plywood with phenolic resin-fiber surface, designed for severe weather exposure. Guaranteed against delamination for life of building. Brochure from:

U. S. Plywood Corporation  
777 Third Avenue  
New York, New York 10017

## GLASS TOPS FOR SKYLIGHT PURPOSES.

*Leaded and Colored Glass.*

## WINDOWS

Plexiglas information (see also pp. 92-93)

Rohm and Haas  
Independence Mall West  
Philadelphia, Pa. 19105

Polyacrylates (Lexan) information (see also pp. 92-93)

General Electric  
One Plexiglas Ave.  
Pittsfield, Massachusetts 01201

Butyrate information from  
Eastman Chemical Products Incorporated  
Kingsport, Tennessee 37662

Flexible vinyl:

—4 mil optically clear, lasts about 1 year in direct sun, 64 sq ft, can order by mail:

Wards Farm Catalog.

—15-20 mil, wavy clarity, lasts several years in sun, 8-106 sq ft, depending on quantity:

Transparent Products Corporation  
Box 15924  
L. A., California 90015

Translwrap West Corporation  
1579 Custer Avenue  
San Francisco, California 94124

—both of the above companies have a number of different window materials—aluminized mylar, Lexan, plexiglas, etc.

Clear UPVC rigid vinyl, flexible plasticized vinyl from  
Plastic Sheet Laminating, Incorporated

Plastic Sheet Products  
3216-15 Pittston Avenue  
Scranton, Pennsylvania 18505

Skylight Designer's Handbook—excellent booklet on glass and

plastic designs: **My Specialty is Artificial Light.**

O'Keefe's Incorporated  
75 Williams Avenue  
San Francisco, California 94124

## New Materials

### FLEXIBLE SKIN MATERIAL (FOR TENT DOMES)

Armor Shell—dacron or nylon fabric coated with .004 mil PVC. Rolls 72", 124", 100 yards long. Somewhere between 10-20¢ per sq ft. Sample book from:

Cooley Incorporated  
7300 Artesia Blvd.  
Buena Park, California 90620

Webster—similar to Armor Shell, info from  
Astrup Webster Industrial Fabrics  
Cleveland, Ohio 44113

Shelter- Lite—vinyl coated fabrics with polyester substrate. Materials 1026, 7124, 5000 appropriate for skin material. 10,000 yards of No. 3022 were used for the double skin of a geodesic dome at a New York World's Fair. Heavy duty, relatively expensive. Info from:

Domestic Film Products Corporation  
N. L. MacKellar Associates  
16250 Meyers Rd.  
Detroit, Michigan 48235

Swiles and Company  
900 N. Alvarado  
L. A., California 1 90026

Coated fabrics (tristrip nylon, vinyl coated fiberglass, silicone rubber coated dacron, etc.) Brochure: "Coated Fabrics for Industry" from:

3M Company  
Film & Allied Products Division  
1801 South Sharnock Avenue  
Minnetonka, CA 91016

Parachutes: 24 ft. diameter canopies, white and in good condition. \$22.50 plus postage and tax from:

Security Parachute Co.  
P. O. Box 3056  
San Leandro, CA 94578

All types of mylar and other skins. Laminates of mylar with dacron scrim, rip stop nylon with metallized mylar one side, etc.

Exotic and expensive stuff. Info from:

G. T. Scheldahl Company  
Northfield, Minnesota 55057

Glue for fabrics—Belt Bonding Cement

Power Lines  
245 W. 25th St.  
NYC, New York 10001

Plastic-reinforced industrial fabrics:

Sun Chemical Corporation  
185 6th Ave.  
Patterson, New Jersey 07524

—See also, Wards and Sears catalogs for canvas.

—See yellow pages for awnings, industrial covers, pool covers, etc.

Acetate, Rayon, Nylon, Saran, Chrompump, etc. information. List of manufacturers and basic principles of manufacturing and use. Brochures, "Man-Made Fiber Fact Book" and "Guide to Man Made Fibers" from:

Man-Made Fiber Producers Association  
350 5th Avenue  
New York, N. Y. 10001

## Electric Elevator

The Strongest Natural Cement Manufactured in America.

Remember Well This Address.

### FOAM

Good source for low cost foam and good advice on proper technique:

Lloyd Fox  
Douglas and Sturges  
730 Bryant Street  
San Francisco, California 94107

Pour and spray foam; Speedhite latex fire retardant paint with flame spread of 10, can be sprayed on foam.

Pittsburgh Plate Glass is one of the foremost and knowledgeable foam manufacturers. They have some excellent free information on foams and foam paints. Technical information bulletins on Selection on Resin Products and Electrofoam Resin Products. Brochure "Selectfoam Rigid Urethane Foam" has comparative chart of all insulating materials. Information from:

Materials Supply Company  
Box 28307  
San Francisco, California 95828

Or

PPG Industries  
One Gateway Center  
Pittsburgh, Pennsylvania 15222  
Attn: Resin Products Sales

Ask Dow for information on 3 types of rigid foam: styrofoam, Thermax (polystyrene), and Doryon.

Dow also makes Deraspan Foam Liners, a sandwich panel of styrofoam, faced on both sides with plywood, asbestos board, al aluminum, gibsboard. Information and samples from:

The Dow Chemical Company  
Construction Materials  
Midland, Michigan 48640

Rigid foam insulation

Western Foam  
464 Victory Avenue  
South San Francisco, California 94080

Rigid foam boardstock:

Apache Foam Products  
Division of Milimeter-Onyx Corporation  
3400 North McKinley Road  
Belvidere, Illinois 61008

General Plastics Company  
3400 North 35th Street  
Tacoma, Washington 98409  
Attn: L. W. Schatz

## Cheapest

### SEALANTS

Thosco Joins Design Digest for Polyulfide Base Compounds from Thiol Chemical Corp.

Box 1296  
Trenton, N. J. 08607

Technical data: Extrusion chart shows how much caulk is needed per in. ft of joint; coverage chart shows coverage per gallon for various film thicknesses.

from Harold A. Price Co., Inc.  
P. O. Box 1389  
Richmond, CA 94802

Brochure: "Seven Steps to Sure Sealing," on Dow Corning 780; read in place with instructions for use.

from Nearest Dow or Price

Access info on silicone, polysulfide, polyurethane, and acrylic caulks on p. 90.

Elaston rubber foam coatings:

United Paint Manufacturing, Incorporated  
1130 E. Sprague Avenue  
Spokane, Washington 99202  
attn: Technical Coatings

Closed cell neoprene tape 3/16" X 1", stickum one side about 74 in. ft, from:

**Boiler and Pipe Coverings**  
A. B. Boyd Company  
1225 Howard St.  
San Francisco, California 94103

Weatherbar one-part sealant, Scotch Seal Metal Sealant, other information from:

Adhesives, Coatings and Sealers Division  
3M Company  
2501 Hudson Rd.  
St. Paul, Minnesota 55119

### TAPES FOR DOME SEAMS

Fab-Dek: 35 mil Hypalon impregnated with neoprene. 3" wide roll, 1141in. ft. Adhesive 541-501/gallon. F.O.B. plant:

Miracle Adhesive Corp.  
27279 Industrial Boulevard  
Hayward, CA 94545  
or 250 Pettit Avenue  
Belmonte, L.I., N. Y. 11710

Fiberglass tape with isophthalic resin. Brochure from:

TAP  
1710 E. 12th Street  
Oakland, CA 94606

Over 1000 various pressure-sensitive tapes. Brochure: "Tapes for Industry" from:

3M Company  
320 Shaw Avenue  
South San Francisco, CA

*Send for Samples.*

Elaston rubber foam coatings and tape dome seams:

United Paint Manufacturing, Incorporated  
1130 E. Sprague Avenue  
Spokane, Washington 99202  
Attn: Technical Coatings Division

Celastec tape is used by Geodesic Structures, Inc. of Round Brook, New Jersey for sealing polydome domes. Info on: tape from:

Depusco Company  
No. 2 Pennsylvania Plaza  
Medison Square Center  
New York, New York

Cybond 4546 polyurethane contact adhesive can be used to adhere flexible tape or thin rubber, then painted with Polane polyurethane paint, from:

Fiberlay, Incorporated  
1158 Fairview Street  
Seattle, Washington 98109

Catalog of pressure sensitive tapes. Vinyl, polyethylene, double faced tapes, electrical tape, etc. from:

Arno Adhesive Tapes, Incorporated  
Michigan City, Indiana 46360

### FIBERGLASS

Fiberglass, polypropylene, other fabrics, tapes, resins:

Abe Shuster Fiberglass  
6211 Telegraph Avenue  
Oakland, California 94609

Excellent fiberglass info, polypropylene, Dynel fabrics, different resins, useful data. Marine Buyer's Guide, 75¢ from:

Defender Industries, Incorporated  
384 Broadway  
New York, New York 10013

For PERFECTLY VENTILATING BUILDINGS OF EVERY CHARACTER.

### MISCELLANEOUS

Strap and strapping tools:

A. J. Gerrard and Company  
400 East Tenth Avenue  
Des Plaines, Illinois 60018

Check yellow pages (strapping) for closest location, or other companies.

Rust-proof MONEL staples, staple guns:

Duo Fast Corporation  
1485 Third Street  
San Francisco, California

Extrusions: rubber and synthetic, about 40¢-81¢ per ft, making the mold is surprisingly cheap, as low as \$40. This means you can design an extrusion tailored to your needs. From:

Wefco Rubber Manufacturing  
1655 Euclid Avenue  
Santa Monica, California 90404

89% Fibre

# INDUSTRY

Workers of the world, disperse.

Fred Richardson 1970

The report from ALLOY (Spring 1969) is reprinted here in full because the event turned out both significant and unique. A number of personal and inventive journeys made a lasting turn there. Certain issues came clear and common: coyness about money, the uses of structure in events, the bonding of mutual hardship, coherent action without subservience, and our wealth of knowledge and wealth of ignorance about processes closest to us. A faith was built: we have the juice.

-59

This presence of the world is in us all the time. You don't need television or newspapers to know about the war. You can feel it.

Love is joy.  
Joy is love.

The framework is made of fencepost pipe they cut to size at the factory. We flattened the ends in a vise and bolted them together. The frame for the whole dome cost about \$100.

It's amazing that a hundred hippies could come together and even eat at all.

Catch-22 says you can't live in a temporary structure.

Except temporarily.

So there she was with a 2-day-old baby hanging off her tit directing the construction of the dome.

There's some far-out pitfall beyond that solution.

You know it isn't working for them when they give it away for people to try out.

The world is one big blank working out its destiny as fast as it can.

If there's one thing we're good at, it's painting stuff up.





# ALLOY

New Mexico is the center of momentum this year, and maybe for the next several. More of the interesting intentional communities are there. More of the interesting outlaw designers are.

ALLOY was their first programmatic gathering. Conducted at an abandoned tile factory near La Luz, N.M. between the Trinity bomb-test site and the Mescalero Apache reservation, the conference lasted from Thursday to Sunday, March 20-23: the Vernal Equinox.

The event was initiated and organized by Steve Baer with Berry Hickman. Ray Graham donated the use of the land. Baer had in mind a meld of information on Materials, Structure, Energy, Man, Magic, Evolution, and Consciousness, so he invited individuals with amateur or professional interest in these areas to take responsibility for their coverage in the discourse. He also invited

performances by Libre, Drop City, Bill Pearlman's theatre group from Santa Fe, and the Whole Earth Truck Store.

150 people were there. They came from northern New Mexico, the Bay Area, New York, Washington, Carbondale, Canada, Big Sur, and elsewhere. They camped amid the tumbleweed in weather that baked, rained, grayed, snowed, and blew a fucking dust storm. Who were they? (Who are we?). Persons in their late twenties or early thirties mostly. Havers of families, many of them. Outlaws, dope fiends, and fanatics naturally. Doers, primarily, with a functional grimy grasp on the world. World-thinkers, drop outs from specialization. Hope freaks.

Among the voices here are J. Baldwin, Lloyd Kahn, Steve Baer, Dave Evans, Gandalf, Berry Hickman, Stewart Brand, Steve Durkee, Peter Rabbit, Dean Fleming, and brother anonymous.



How can you exchange with 150 people?

No one wants to be an audience. You can talk if you give them a desert at the end. You need some way of recording it, otherwise it devolves into an endless circle of rap.

Everybody's assuming the human potential is a static thing.

The whole system is going the wrong goddamn way. We're not investigating what we should be investigating.

It can't get out of control because it already is out of control.

The mike is a ploy to create structure. It doesn't have to be plugged in.

We're in some incredible bind that we can't even move around enough to know that we're in it. Maybe the only way you can get in the right place is by rattling. If this thing we're doing isn't a big rattle, I don't know what is.

These relationships between people have not been based on some kind of appreciation of what the structure of the world is.

We want to change ourselves to make things different.



## Materials



J. Baldwin talking

One way of getting a design is by asking the question:  
How do you use the new materials you have?

There are new kinds of cardboard that approach  
plywood in strength.

You can stamp out houses like cardboard toys,  
really cheap. A cardboard house for a family of  
four would cost \$35 for the shell.

So a \$35 house breaks down in five years...

With cardboard you can do large things quickly,  
can do 3-D sketches without drawing plans.

Cardboard is cardboard, not plywood, so if you're  
going to make something out of cardboard, treat  
it as cardboard.

A temporary structure only needs to meet  
certain building codes.

You can buy foam crusts really cheap, like  
50 cents a pound.

Check out the Encyclopedia of Modern Plastics.  
McGraw-Hill publishes it.

You could program a structure with built-in  
squishy places.

Ferro-cemento weighs over 10 pounds a square  
foot.

The curing is very delicate. It has to cure for  
like a month.

As it cures it contracts or expands. Concrete  
will cure under water.

It's fantastically strong stuff. An F-C boat  
hit a rock going at 12 knots and it smashed  
the rock.

Have you heard about Maybek's experiments  
with gunny sacks? You dip them in concrete  
and lay them up on the screen like shingles.

The price is starting to come down on foam.  
The gun is getting better. The fire resistance  
is getting better.

We've been using silicon car wax on any surface  
we don't want the foam to stick to.

These foam buildings. They very slowly flow.

Union Carbide can be scrounged for materials.

With Bini-Shell technology you can inflate  
your foam dome from the ground.

If you want to find  
out about tape, don't  
ask 3-M; find a man  
who's taping some-  
thing together.  
Manufacturers are  
the last to find out  
about their products.  
Once you've tried  
something you can  
sell the information  
back to them.

As the temperature  
changes the tape  
walks.

Black builder's poly  
lasts 10 times longer  
than clear poly.



Lloyd Kahn speaking



## Structure, energy

Everyone at first feels this kind of awe for domes and things.

When you talk about energy you talk about the sun. It's difficult to talk about the sun because we're in it all the time. You have to feel it in order to utilize it. One of the real characteristics of energy is that it comes in lumps, and it takes a bunch of people to trap it.

Glass isn't clear. It isn't.

What do you mean the sun doesn't go around us?  
It's obvious it goes around us.

I have a particular joy in dealing with things like this.

All your parts have to be in accordance with those sacred lines or it won't fit together. The sacred line is no more than an agreement. It's very helpful if you can describe those things ahead of time.

You can't patent geometry but you can patent linkages.

—We want to have a factory. We want to put this cost-rose on everything we produce. What it cost us. How it was made.

If you can just see into something. You don't need expensive equipment, that's for sure.

Here I am bullshitting you all. I don't have a bicycle. I also don't solar heat my house. And I don't live in a dome. I think maybe I'll sit down for a while.



Steve Baer talking



I'll tell you anything you want to know and show you anything you want me to show you about domes, but you probably won't build it because you're too lazy.



'It does different things.'

What sort of research do we do to use the technology in order to improve our own minds?

We are trying to develop computers that will help human beings to develop computers. The human and computer work symbiotically.

A lot of what goes on in our heads is dictated by what goes on outside. And what goes on outside is subject to our control.

We think there's a whole world open to the human being where he can represent outside himself the symbols and patterns he needs so he can get where he wants.

We've got a new technology for representing symbols.

So all of your thoughts that you had are in there just as you had them when you had the flash.

You've got to know when to stop going in little bits and save yourself up and make a big jump.

Geology means earth logic.

Money is the way that I can easily transfer my energy to you. Economics is the study of transfer of energy in the society.



Robert Frank filming



Dave Evans talking





# Man, Evolution, Consciousness

Trust is the reality of the road being cleaned, the trash being emptied.

We're after profit. But we're after the kind of profit we're getting here. Think about what the word profit means for five seconds.

I want to get in and find out what money means. It can make you nervous.

Money makes the transfer so easy that the transfer itself becomes an obsession.

I pray for money.

Kesey says he used to cast his bread on the waters. Now he's saying you got to pick your waters.

How are you going to get money? The thing is that it's fluid. It has to pass between bodies. It doesn't have to be held onto. We're in a transitional world. I've tried to prepare the best water for money to float on.

I smoke therefore I am.

We were brothers before we were dopers.

You can get flashes all kinds of ways. I got a flash once when my parachute didn't open.

You can use dope as a pure design tool.

You don't have to take dope to do things.

You're just saying that there is in reality no guarantee that life will continue. The right to live is a fiction. It's a pretense as a political reality.

Try to understand that although we are different we are all trying to do something. People won't stick with it. This is the tough point. This is the hinge. What are we really doing together. Is it connected? Where is it connected? How is it connected?

Is it possible to be able to have access so that one person is not the only person in the position to know or to do things?



We're involved in an action-reaction game. A lot of the talk is empty cups pouring themselves into one another. Like this. Or what if your cup is full and you try to pour water into it? Look. We assume that we know everything, rather than emptying our cup. Teach me, for I know nothing.

Magic is the manipulation of matter by unseen forces. You can see unseen forces if you want to take the time. How many people here could build a car? How many could refine gas? Could you take care of yourself on the lowest, simplest level? Before we go solving the world's problems I think it's important to know right where we are on this ground.



Steve Durkee blowing helium bubbles

If you've got to junk everything that's been written in order to find yourself in the world, do it.

Am I this 6-foot body or am I something else that could exist beyond it? If we could get enough information maybe we could go beyond the flesh envelope.

You've got to be dissatisfied. You have to know that it's not good enough. It's not giving the juice, you know? The other thing is you have to know there is a possibility. You can grasp the living rod.

The sly man takes the pill. The problem with that is you may be the sly man who opens the door, but there may be nothing there when you open it.

There's a lot of people who want the Apocalypse. Instead of looking at it as the death force, there's a possibility of the emergence of something new, a re-shuffling of the deck.

In times this turbulent the world is ready to follow any man who feels good.

Evolution is at work here as strongly as anywhere.

The main design element of evolution is variability. The times are weird and a lot of the old forms are hanging on stiff and tight. All of us are going out and trying different things. Each community has its own notions of how to do its own civilization. The more communities the better. Big ones, little ones, urban, rural, travelling, money, no-money. With a lot of them happening, some sets do better than other sets.

You can study the evolution of man by the evolution of his tools. You can study the evolution of tools by the evolution of man.

There's a paradox. Isolation leads to over-specialization. But you have to isolate yourself somewhat in order to make your scene different than the others. Maybe it's a balance. Maybe discrete mixing events like Alloy can help.



You can randomize your behavior a little. Everybody has a notion of who they are, their character, and all their decisions converge toward that notion as if they meet at the grave. With some decisions, why not flip a coin?

Take the path you haven't taken before.

That was the Holy Grail step. When the knights left the Round Table in search of the Holy Grail, each man entered the forest where it looked most impossible to him.

Whatever frightens you, do it. That fear is a valuable key.

Evolution is any dynamically self-organizing system. The process improves itself without external influence. Everything's inherent. Every misfit carries some of the load of making the whole more fit.

Evolution and cybernetics are going to come together. This is the edge of knowledge right now, and it's right at the heart of education, and the schools don't know it.

There you are sawing away on your violin, and every now and then you catch a piece of the symphony. The trick is, when that happens, not to drop your violin.

Intention is a weird thing in evolution. I don't think anybody understands it, but we're doing it a lot. We're increasingly putting our finger in the pie, and we are the pie, and the finger, and the putting.

It's all those choices that we make. Then we give those to the next people.

If you want to try a new way, you've got to build something.





## What is Design?

There really is no better introduction to all that is admirable in design. Baer had to remind me of the book: I had forgotten how much I owe to it. It is full of the kind of lore and wisdom that you immediately take for your own.

—SB

The book is wonderful. Here is a man trying to tell the truth about design and about our lives and civilization. I never heard of him, when I read his book I can't understand why. Steve Baer

## What is Design?

Paul Jacques Grillo  
1960, 238 pp.

\$14.75 postpaid

from:  
Paul Theobald and Company  
5 N. Wabash Avenue  
Chicago, Illinois 60602

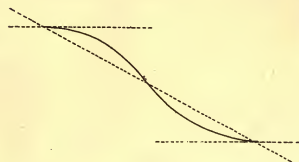
or WHOLE EARTH CATALOG

Don't work for success, whether success to you means a degree, position, money, or honors. You cannot reverse the process of nature: since no fruit in spring can produce flowers in the fall, you cannot visualize the harvest before the seed matures into a healthy, full-grown plant. A hot house may grow faster products, but none that can compete with the authentic product of the soil. This attitude will force you to give "too" for an answer more often than "yes," if you are concerned only with the integrity of your production. Then your "YES" will be uncompromisingly sincere. The worst lie is the lie you give to yourself as an excuse for success.

Burn your idols once in a while, and start all over again.

Flout the rules as often as you can in a masterly way. Recipes are for poor cooks. Great chefs make them. The canons of rules and codes that you have had to learn must be transgressed with vision for any art to be born.

Finally, during all your life as an artist, learn through painstaking experimentation, exercise, and practice, how to acquire a masterly knowledge of your craft.



## IN DESIGN, THE SHORTEST DISTANCE BETWEEN TWO POINTS IS NOT THE STRAIGHT LINE, BUT THE SLALOM

Slaloms are curves of natural acceleration and deceleration that represent trajectories constantly controlled by man.

A ballistic missile obeying only initial thrust and gravity will describe an orbit mathematically perfect of the conic section family. But as soon as man sits at the controls, he will make his own orbit, his slalom.

Curves described by a man in movement—a car, a bicycle—on a flat surface, are two dimension slaloms, or curves of the second order that may be approximately analyzed in quadratic equations.

A mountain climber, an airplane, a submarine—as well as a skier—describe third order slaloms that may be analyzed in cubic equations.

The interest of slalom curves for the designer lies in the fact that they are all curves of least effort, and thus represent the most economical pattern of flow.



You may buy this eternally contemporary piece of design in any authentic Chinese hardware shop.



The Normans, great seafarers before setting down to farming, have devised their farmhouses exactly like the hulls of their ships, anchored them upside down on the land, the bow to the wind and the stern sheltered toward the east. They are like ships that heave-to in a gale. The single chimney crowns the western end of the roof and draws at the least breeze, while the eastern end is wide open like the captain's quarters in the stern of a galleon.



The Ganges Shark (Platyodon gangeticus)

McDonnell Voodoo F-101A (1954)

## Design Methods

The discipline of design is misunderstood by many people. This book is going to help explain things. The author briefly presents some of the obvious design failures in our industrial society, such as traffic congestion, noise pollution, etc., and says: "...These need not be regarded as accidents of nature or as acts of God, to be passively accepted: they can instead be thought of as human failures to design for conditions brought about by the products of designing. Many will resist this view because it places too much responsibility on designers and too little upon everyone else. If such is the case then it is high time that everyone who is affected by the oversights and limitations of designers get in on the design act."

The book outlines traditional approaches. It then goes ahead and gives a really useful review of thirty five recently developed strategies, a brief description of each, and a way of determining which will likely be most useful to you. Many of the strategies are ways of organizing your information so that your intuition can be well enough informed to act. Several of the strategies are mainly concerned with preparing your head so that it may intuit effectively. Methods of analyzing the results are also presented.

As far as I know, this book is the only overall collection and review of strategies. I see it as a truly useful tool. I've ordered one myself.

[Reviewed by Jay Baldwin]



The complicated pattern of the network on the left can be transformed into the single pattern on the right by re-arranging the nodes. This is analogous to the "change of set" which can enable one to solve a previously insoluble problem.



Barthen hut built by the Bamileke tribe in the Cameroons.

"I remember a priest explaining the zig-zag arch to me: 'Enl is like a rhinoceros. It always charges in straight lines. We break the line of the bridge so that enl cannot cross, but falls over the edge to drown in the deep water in the middle.'" From A Portrait of Japan, Laurens van der Post, 1968.

## Thinking from Several Viewpoints

This is similar to "thinking in parallel planes" but is directed at the solution to the design problem instead of at the process of finding it. At its most elementary it seems to be the stating of objectives by describing the product as something that "provides a means" of doing something else.

- study the design situation
- provisionally identify the needs that the design is to satisfy
- identify and analyze the Primary Functional Need (this is the need that if not properly satisfied makes the fulfillment of all other needs pointless)
- explore alternative principles upon which a means of satisfying the primary need could be based
- complete, in outline only, a design capable of satisfying both primary and secondary needs
- review the functional effectiveness of this design
- review the material and work content in producing the design
- review component quality, i.e. freedom from welding distortion, refinements, etc.

## Design Methods

J. Christopher Jones  
1970, 407 pp.

\$14.50 postpaid

from:  
John Wiley & Sons, Inc.  
605 Third Ave.  
New York, N.Y. 10016

or WHOLE EARTH CATALOG

## The Design of Design

It's superficially a book for design engineers, but should be useful to anyone engaged in the design of physical objects or strategies. Simple and basic. More advanced treatment of design techniques gets you into computers and very sophisticated decision making theory. The main trip is concentrated on getting your head straight so that design decisions of any sort can be made intelligently. There's a good bit of practical advice concealed in a flurry of English Humour. The only book of its type that we know of. Among the better points:

Concentration and then relaxation is the common pattern behind most creative thinking.

Beware of intrinsic impossibilities.

Beware of pseudo-technical words. [He means words like "sturdy," "big," "beautiful", etc.]

Define problems in figures or configurations.

Aim at continuity of energy.

He really gets to the center of the modern/technology-versus-New-Mexico-Funk argument:

If the design of a particular machine or production line is based on the way the process was originally done by hand, it is unlikely to be the final form. The feeding forward by mechanizing a style that was handy when only hands were available is doomed, in the long run, to be superseded by the feeding back of ideas and materials from the physical sciences. Beware of well-dressed arts and crafts.

[Reviewed by J. Baldwin]



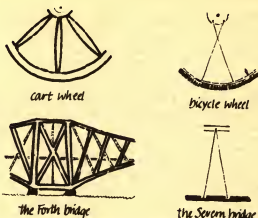
The Design of Design  
Gordon L. Glegg  
1989; 83 pp.

\$6.95 postpaid

from:  
Cambridge University Press  
32 East 57th Street  
New York, N.Y. 10022

or WHOLE EARTH CATALOG

Iteration	Iteration
Tricycle racer	Tricycle on wheels
Kodakbrown film	Musicon
Ballpoint pen	Snodger
Automatic telephone	Unabomber
Parking meter	Journalist
Pneumatic tyre	Veterinary surgeon
Long-playing record	Television engineer



Suspension bridge designers thought at first that the major problem would be the load, and learned by spectacular experience that it was really the stability.

## Structure, Form and Movement

The usual procedure is that R&D comes up with a new process, it's implemented for several years, and then some biologist says Hey did you know porpoises did that? Or snakes did that, or bees or elm seeds. And everybody says My, my, ain't Nature smart.

Herr Hertel and colleagues are trying to reverse the order, learn from nature first, save time and stay humble. (This approach now has a name, "biotics"; a book by that title that's a name is terrible.)

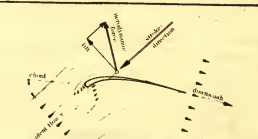
This book may be too expensive for its direct usefulness, but it thoroughly displays the approach that research may take to bugs, birds, fish, etc. for yield in navigation, flight, streamlining, etc.

—SB



Golden eagle. Leaping off. Legs flexed at left, extended at right

Fig. 52 Beginning of take-off = wing stroke forward and down  
Incident flow - downwash - forces.  
Below: stagnation point; flow around the leading edge.



## Structure, Form and Movement

Heinrich Hertel  
1965; 261 pp.

\$18.50 postpaid

from:  
Van Nostrand Reinhold Co.  
480 W. 33rd St.  
New York, N.Y. 10001

## Design for the Real World

Industrial design is in deservedly bad odor lately, and this book will give you many of the reasons—most of them having to do with pandering to self-exaggerating marketplace fashion, the disposable environment.

Victor Papanek is a Bush Designer. He prefers to hang out in Third-World places, where the problems are physical and serious, and where native design genius can be learned and applied to them using industrial materials. This book works on distinguishing between real and phoney design problems, and their solutions.

—SB

## Design for the Real World

Victor Papanek  
1971

\$7.95 postpaid

from:  
PantheonBooks, Inc.  
401 East 56th Street  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



Artificial burrs, 40cm long, made of bio-degradable plastic and coated with plant seeds and a growth-bio-degradable solution. To reverse erosion cycles in arid regions. Student designed by James Herold and Jolan Truan, Purdue University.



For a long time, I don't remember how long, but it was years, literally years, I could not get all the parts of speech together. Or if I could get them together, I could not get them together in the proper sequence. One week I could speak sentences that had everything in place except the verbs. I just could not remember verbs. I couldn't say, "I am going to town." "I am town," was the best that I could do, and it was maddening. The next week it would be nouns, or adjectives, just... missing, that was all. Like not having enough tools or parts to finish putting something together with. And so I would just not say anything to anybody. I wandered lonely through the world muttering "Cheesburger" now and then, or "Where?" or "When?" or "Why?" Of course my silence was not true silence. In my mind there was utter chaos. My mind never stopped. Day and night it went on and on, and on, remembering everything that ever happened, every conversation I had ever heard, playing them over and over, with new embellishments and adornments each new time.

The year it was at its worst I lived in San Francisco. There was supposed to be an earthquake that year. All the talk was of earthquakes, earthquakes. I was in California, this really heavy war. Earthquakes and Edgar Cayce. I was convinced there was going to be an earthquake, that California was going to tumble into the sea. And my trip was, I wanted it to happen. I wanted California to fall into the sea, and I wanted to fall in with it, to be swallowed up by a thing so big, so huge, so utterly enormous that I would disappear into absolute nothingness. I wanted to see heave and slide and fall with the greatest roar and rumble the world had ever known. And I wanted to go down with it because then I wouldn't have to think about the parts of things. If the parts would not come together and function for me, then let them fly apart, scatter and be gone weightless through the universe. Let freedom reign! Let nothing matter! That was my belief.

Well, of course, as we all know, there was no earthquake. California didn't fall into the sea. I was disappointed but sobored a good deal by the months I spent in anticipation of it. My head felt clearer. I began to speak simple sentences again. I got interested in art. I got interested in the possibility of Atlantis rising again, and I wondered what I ought to do about it. I even sat down one day and wrote a little pamphlet called, "What To Do If Atlantis Rises," and had a few hundred copies printed up. I tried to sell the copies, and when no one would buy them I started giving them away to people passing on the street.

(continued)

An ambulance can cost as much as \$28,500. Where are well designed, low cost inserts that would convert any station wagon to ambulance use during a national emergency? With the number and prices of ambulances now, this particular national emergency began about 20 years ago!

Radio receiver designed for Third World usage. It is made of a used juice can, and uses paraffin wax and a weak power source. The rising heat is converted into enough energy to power this non-electric receiver. Once the wax is gone, it can be replaced by more wax, paper, dried cow dung, or anything else that will burn. Manufacturing costs, on a cottage industry basis: 8 cents. Designed by Victor Papanek and George Seeger at North Carolina State College.





## Science and Civilization in China

Joseph Needham is a renowned biologist who travelled into unexplored regions of Chinese technological history and became a yet more renowned historian and interpreter of what is for most of us the back of the planet. His series is awesome in size and depth; he's done the mining, but you've got to refine the ore to suit your own purposes. One purpose I know was Vic Lovell's, who found in Vol. I a rich lode of information on Taoism and how its influence helped the Chinese discover and utilize some technology long before the West and also overlook or never utilize other stuff that the West seized on. Another purpose might be taking some of the mechanical inventions of old China—from man-kites to water-wheels—and applying them to the hand technology of intentional communities. There's no source like the source in these matters.

The quotes and illustrations to the right are from Vol. IV, Part 2: Mechanical Engineering. All the volumes are available from the publisher and WHOLE EARTH CATALOG.

—SB

## Science and Civilization in China

Joseph Needham

Vol. I Introductory Orientations, 1964:

\$15.50

Vol. II History of Scientific Thought:

\$23.50

Vol. III Mathematics and Science of the

Heavens and the Earth,

1959: \$32.50

Vol. IV Pt. 1 Physics,

1962: \$15.50

Pt. 2 Mechanical

Engineering, 1966:

\$35.00 postpaid

from:

Cambridge

University

Press, 32

East 57th St,

New York,

N.Y. 10022

or

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Fig. 650. Pictorial reconstruction of the astronomical clock-tower built by Su Sung and his collaborators at Kaifeng in Hsien, then the capital of the empire, in +1090. The clock-work, driven by a water-wheel, and fully enclosed within the tower, rotated an observational armillary sphere on the top platform and a celestial globe in the upper story. Its time-announcing function was further fulfilled visually and audibly by the performances of numerous jacks mounted on the eight super-



imposed wheels of a time-keeping shaft and appearing at windows in the pagoda-like structure at the front of the tower. Within the building, some 40 ft. high, the driving wheel was provided with a special form of escapement, and the water was pumped back into the tanks periodically by manual means. The time annunciator must have included conversion gearing, since it gave 'unequal' as well as equal time signals, and the sphere probably also had this (see p. 450).

Allusion has already been made to the 'south-pointing carriage' (dih nan che) in Sect. 261 on magnetism, since it was long confused, both by Chinese and Westerners, with the magnetic compass. We know now, however, that it had nothing to do with magnetism, but was a two-wheeled cart with a train of gears so arranged as to keep a figure pointing due south, no matter what excursions the horse-drawn vehicle made from this direction.

Fig. 707. Page of drawings sent by Cayley to DuPuis-Desout in 1853 illustrating an improved Chinese helicopter, top which would mount more than 90 ft. into the air. From Hubbard & Ledebur (1). This was the direct ancestor of the helicopter rotor and the godfather of the aeroplane propeller

Fig. 689. Typical Chinese horizontal windmill working a square-pallet chain-pump in the salterns at Taku, Hopei (King, 3). The fore-and-aft mat-and-batten type sails luff at a certain point in the cycle and oppose no resistance as they come back into the eye of the wind (see diagram on p. 569)



Gibbs' Paradox

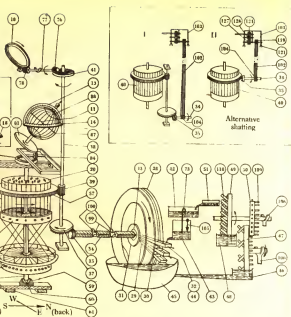
Experience suggests that as two diffusing gases become more and more alike the change in entropy due to diffusion should get smaller and smaller, approaching zero as the gases become identical. The fact that this is not the case is known as the Gibbs' Paradox. Bridgman explained it in the following fashion: in principle at least it is possible to distinguish the dissimilar gases by a series of experimental operations. In the limit, however, when the gases become identical there is a discontinuity in the operations in as much that no instrumental operation exists by which the gases may be distinguished. Hence a discontinuity in a function such as change in entropy is to be expected.

Hubble Effect

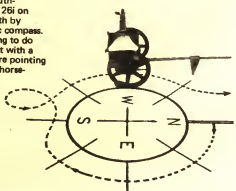
Distant galaxies show, in their spectra, red shifts which increase proportionally with the distance of the galaxy. This effect is consistent with the hypothesis of an expanding universe.

Huygens' Principle. (Huygens-Fresnel Principle)

Every point of a wave can be considered as the centre of a new elementary wave. The resultant wave produced by the interference of all these elementary waves is identical with the original wave.



Su Sung's treatise on the clock, the Hsin I Hsueh Fa Yao, constitutes a classic of horological engineering. Orig. drawing by John Christensen. The staircase was actually inside the tower, as in the model of Wang Chen-To (17). The historical significance of the mechanical rotation of an astronomical instrument (a clock-drive) has already been discussed in Vol. 3, pp.359ff.; cf. also p.452 below.



Wind direction

Fig. 519. Diagram of a sailing wheelbarrow from van Braam Houckgeest (+1797), showing the bottom sail and multiple sheets so characteristic of Chinese nautical craft (cf. Sect. 29g below).

Archimedes' Principle

When a body is immersed in a fluid there is an apparent loss in weight which is equal to the weight of fluid displaced.

Archimedes' Spiral

A point, moving uniformly along a line which rotates uniformly about a fixed point describes a spiral of Archimedes. The equation is:  $r = a\theta$ .



## Science and Civilization

My favorite vol. of Needham (*Sci & Civ in China*) is Vol II which has the chapter on Taoism (not Vol I as you have it in the Fall 69 Catalogue). That chapter tells everything from how to perform coitus interruptus (haven't tried it but the directions are clear) to the origin of won ton soup (used to be an alchemical elixir)

Mark Engle  
Ben Lomond, CA

## A Dictionary of Named Effects and Laws in Chemistry, Physics and Mathematics

This is the closest thing to a shortcut to fundamental science that we're likely to find. A book of purest ingredients, the grand or peculiar connections that were so new and special that they got a word to themselves, the name of the finder.

A truck full of mental axes, chisels, sewing needles, screwdrivers, nail clippers, chainsaws, calipers, sand paper, coffee urns, telescopes, dynamite, and glue.

—SB

## A Dictionary of Named Effects and Laws in Chemistry, Physics and Mathematics

D.W.G. Ballentine, D.R. Lovett  
1966, 1961, 1970, 336 pp.

\$9.50 postpaid

from:

Chapman & Hall Ltd.

11 New Fetter Lane

London EC4

England

or Blackwells (see p. 2)

120 Chinese Technology Industry





Out of a whole section of books on design in the Engineering Library at Stanford, this book looked far the best. Recently Steve Baer (dome and solar designer) came across it on our editing tables, sat down and paged, then got up and hurriedly wrote a letter to a friend about the book and its author. I asked Steve to pick out some useful quotes and pictures and he wouldn't. "Look anywhere you open it," he advised, then ordered a copy.

Contents of the book include: The Engineering Problem Situation, Design Project Organization, Information and the Need Analysis, Identification of the Problems, Information Sources, Synthesis of Alternatives, Estimation and Order-of-Magnitude Analysis, Engineering and Money, Preliminary Design, Engineering Problem Modeling, The Iconic Model, Conceptual Representation, Expansion of the Criterion Function, Checking in Engineering Design, Optimization, etc., etc.

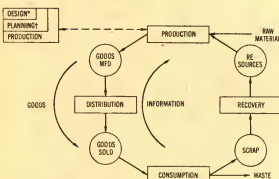
-S8

Introduction to Engineering Design  
Thomas T. Woodson  
1966; 434 pp.

\$11.50 postpaid

from:  
McGraw-Hill Book Company  
Princeton Road  
Highstown, N.J. 08520  
Manchester Road  
Manchester, Missouri 63062  
8171 Redwood Highway  
Novato, Calif. 94947

or WHOLE EARTH CATALOG



\* DESIGN  
\* PLANNING  
\* PRODUCTION  
\* is part of PRODUCTION

Fig. 3.7 The production-consumption cycle, showing the place of engineering design.

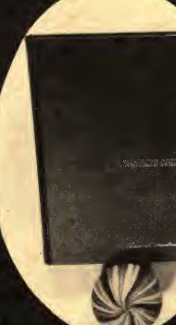


Fig. 6.2 A sketch that changed automobile fender. (Courtesy General Motors Corp.)

## WATER SUPPLY FOR MOUNTAIN CAMP

For another simple example, let us estimate how we would bring water from a running stream into a tank (let's say a Schallan gravity tank) to supply water for a vacation cabin in the woods. A natural supply pipe is 100 ft away upstream, guaranteeing among other things a clean, continuous water supply. Our problem is transport. Shall we use pipe, an open rock-lined channel in the ground, or a wooden flume or trough? See Figure 7.4.

As we think about this, we discard the open channel in the ground as too easily contaminated. The pipe could be laid on the ground; and the wood flume could be supported from tree trunks and possibly covered as shown by the dashed "board" in the illustration. Thus, we have two reasonable ways of doing this job: the questions now concern cost and convenience.

Next we check the sizes needed. If we wanted the 50-gal. tank filled in 15 min, we would need a flow of about 4 gal/min. This is a stream of water about as big as a pigeon's finger when the water is flowing two feet per second, as shown by the equation in the footnote deriving the cross-sectional area,  $A$ , of the stream.

This area would require a pipe one inch in diameter. If we were using the wood "vat" channels, we would need two boards each about three inches wide to avoid splashing over, or one-half board-foot per running foot of channel (foot of channel length). (A board-foot is one square foot of wood, one inch or less thick.)

Now we need to arrive at costs. The most convenient reference is a broad-coverage catalog (such as that of Sears, Roebuck), in which wood, metal, and other supplies can be found listed at retail prices. Of course, one can also phone the retail plumbing or lumber suppliers. In any case, we find:

Wood: 15¢-20¢ / board-foot in the sizes we need  
1 in. iron pipe: 30¢ / ft  
1 in. copper pipe: 58¢ / ft (One size smaller than iron pipe for the same flow rate.)

Assembling one-half board-foot for each running foot of wood channel, the comparisons are:

Wood: 10¢ / running foot, materials only

Iron: 30¢ / running foot, materials only

Copper: 100¢ / running foot, materials only

Since we would do the work ourselves, the cost of labor is disregarded, and it seems that wood should be our choice. On one final check though, we ask whether these are all the choices. Someone suggests plastic pipe, so we look that up: It is corrosion-resistant, flexible, easily connected, sanitary; it has a smooth interior; it could be in one piece and simply laid on the ground. It seems to be a natural choice. The price of 1/2-in. diameter plastic pipe is 10¢/ft; 1-in. diameter is 16¢/ft. Considering the labor needed with wood or iron pipe, or the cost of copper tubing and the plastic's sanitary advantages, the plastic pipe (high-density polyethylene) is certainly the preferred choice.

Thus our final estimate is the use of this plastic tubing, probably 1/2-in. diameter at 10¢/ft.

$$1 A = Q/V \quad (\text{area} = \text{flow/velocity})$$

$$\text{when}$$

$$Q = 4 \text{ gal/min} = 1000 \text{ cu in./min} \quad (1 \text{ gal} = 231 \text{ cu in.})$$

$$V = 2 \text{ ft/sec} = 24 \text{ in.}/(1/60 \text{ min}) = 1500 \text{ in./min}$$

$$A = 1000 \text{ cu in./min} = 2/3 \text{ sq. in.} = 1500 \text{ in./min}$$



Fig. 7.4 Possible water channel sections. Water supply project for mountain cabin.

## Technology and Change

The subtitle of this book is "The impact of invention and innovation on American social and economic development." The author studies this area in the light of experience in several industries, one of which is the building industry, where change has been slow in coming. This book will be of interest to its intended readership in industry. But on a larger scale, it offers an answer to that tech-grinding question: "Why does the establishment resist change?" Or for that matter, "Why does everybody resist change?" This is one of the neatest and best explanations I've seen (perhaps because I so closely matches my experiences as a Professional Designer). It will be interesting for those who wish to better know their Corporation As An Enemy as well as to those who wish to equip themselves and their organization to better deal with inevitable and intentional change. One of his more interesting points is that "revolutionaries" are often a reactionary force instead of being truly revolutionary; they are the conservatives, especially where technological change is concerned. Lots of subjective stuff here. Recommended reading for changebringers.

(Reviewed by Jay Baldwin.  
Suggested by Steve Baer)

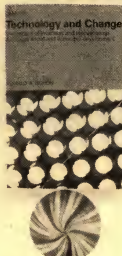
Technology and Change  
Donald A. Schon  
1987; 246 pp.

\$2.25 postpaid

from:  
Datta Publishing Co., Inc.  
750 Third Avenue  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

The crucial form of experiment demanded by the technological, institutional and normative changes of our time is experiment in norms and objectives. The erosion of the objective of the Technological Program leaves us with more information than we can handle and requires the attempt to create situations in which new objectives can emerge.



Unexpected success is no less destructive of the rational view of corporate activity than is unexpected failure. When the addition of carbon black turns out to increase the strength of rubber, when the book-mending tape turns out to have a multiplicity of unexpected consumer uses, when the new plastic, designed for a cheaper molding process, turns out to perform well in a completely different application—the corporate manager can only react with a very smile. In ways he did not understand, and was unable to state before the fact, things have gone with; but what has he learned that will prepare him to cope with the next time?

Corporate behavior is based on regular, orderly, linear, predictable processes—the extension of the industrial manufacturing process itself. How is it to absorb invention?

What used to be stable divisions in our community are no longer stable:

- the division between education and work, and with it, the view of the young as learning and the old as established;
  - the division between labor and business;
  - the old regionalism;
  - the old divisions between race and class and class, and
  - the division between the change-oriented outcasts (inventor, poet, therapist) and the stable society.
- the division between "good" creative private enterprise and "evil" controlling Government.

The call to Revolt has as much appeal as the call to Return. It is an alternate response to the destruction of the myth of stability. In effect, it says that the old objectives are hollow and inadequate. There is oppression, slavery, humiliation, constraint and injustice. There is no Promised Land in sight. Revolt against these things! The call to revolt need not produce its own image of a Promised Land. It takes its image from the present against which it reacts. It gets its concreteness from the life it refuses to accept and is, in this sense, a form of conservatism.

If we cannot be inattentive to change of objectives in our society and cannot accept the silent calls of return and revolt, what is left? How do we ever tolerate and stand up to change in objectives?

## Ideas, Inventions, and Patents

Patents are one of those facets of the establishment that both baffle and infuriate people. It's a complex business. This book gives the clearest and most comprehensive explanation of the whole patent bit that I have ever seen. It is at the same time, a reference book intended to help you understand patents, and an unintentional denunciation of the whole process. The author shows why we have to have patents, what good they do, and how to get one. He also shows how to get around patents, how long you have to wait, and how much it will cost. He reveals the human biases involved in the patent office, and admits that the government is so poorly organized that they may issue conflicting patents at two different parties at the same time! The book is indexed in a way that permits you to easily find answers to questions. If you need to know something about patents, this is it.

(Reviewed by Jay Baldwin)

## Ideas, Inventions, and Patents

Robert Buckles

1957, 270 pp.

\$10.95 postpaid

from:  
John Wiley & Sons, Inc.  
605 Third Ave.,  
New York, N.Y. 10016

or WHOLE EARTH CATALOG

## Human Engineering Guide

Buy this book and keep it at hand at all times if you design or build anything that will be used by, for, or come in contact with people. Concise statement of ideas both through the informative writing and clear illustrations. The authors have followed their own guidelines and produced a device (this book) which will do well what it was designed to do, transfer a large amount of information between people. If you want information on human engineering, design of equipment and work space, vision, audition and body measurement, it's all in this book chapter by chapter. The above categories are a partial list of actual chapter headings. This book should be used by all design engineers, but it is not necessary to be a design engineer or even an engineer to use it. Really fundamental ideas clearly stated can be understood by anyone.

(Reviewed by F. Le Brun)

## Human Engineering Guide

for Equipment Designers

Wesley E. Woodson, Donald W. Conover

1954, 66; 473pp

\$12.50 postpaid

from:  
University of California Press  
2223 Fulton St.  
Berkeley, Ca. 94720

or WHOLE EARTH CATALOG

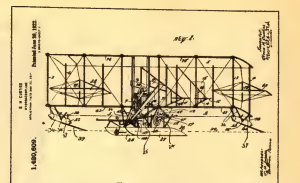
Human  
engineering  
guide  
for equipment  
designers

Where possible, work should be held by jigs or vises so that hands may be free to operate.

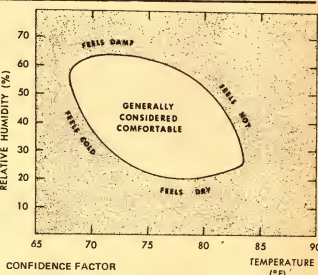
Hesitation — or the temporary and often minute cessation from motion — should be analyzed; its cause should be accounted for and, if possible, eliminated.

When a click in one ear leads that in the other by about 0.03 milliseconds, the sound just begins to shift toward the first side; when there is a time difference of 65 milliseconds or more, the sound appears completely localized on the side of first arrival; this localization remaining until the time difference becomes so great (3 milliseconds or more) that fusion is lost and the sound is heard separately in the two ears.

Since humans are used to evaluating things with "all their senses" from the time they are born, it is natural for them to expect this. Each of the sensory inputs, in fact, raises the level of confidence of the operator in what is revealing — thus the converse of this, i.e., lack of certain inputs, tends to reduce the operator's confidence in the information he is receiving.



Drawings from two patents later issued to Glenn Curtiss when courts finally decided that he was the inventor of the Flying Boat.



Since humans are used to evaluating things with "all their senses" from the time they are born, it is natural for them to expect this. Each of the sensory inputs, in fact, raises the level of confidence of the operator in what is revealing — thus the converse of this, i.e., lack of certain inputs, tends to reduce the operator's confidence in the information he is receiving.

## PART THREE



## EDDIE'S FUNERAL

The mourners were lying around the room on mattresses, smoking hash between hits on nitrous oxide. Nearly everybody there was a St. Louis dealer, and since Eddie had been a dealer The Native thought it would be nice if sample of everybody's stuff was on, in honor of Eddie's passing. Somebody do grass. Somebody else do acid. Somebody else do DMT. Somebody else do IT-230. Somebody else do STP. Somebody else do peyote. Somebody else do mescaline. Somebody else do psilocybin. Somebody else do reds, and everybody there had the laughing gas to tie the whole thing together, in honor of Eddie's passing. But that was just The Native coming on, just The Native doing his usual thing. The Native got home because he was always talking about how nobody's a native anymore. Nobody lives where he was born, nobody's got real roots any more, and that's why people are so unhappy. The Native grew up in the Ozark Mountains of Missouri. He was so homesick most of the time, all he ever talked about was his family and his old home place back in the Ozarks. People at home have got identity, said The Native. They've got a history, and their lives are full of the most beautiful rituals. The Native loved ceremony, and he wanted Eddie's funeral to be one, an elaborate ceremony where everybody would take a different kind of dope and then do communal things like chant and sing and mourn poor Eddie's passing.

But none of the others were up to it. There were eleven people at the funeral, besides The Native. Blue Ox was there, and Gilded Lilly, Chuck, Friendly Persuasion, City Girl and the Crostons Rivals, plus Reid and Winston and Divine Right Davenport and his chick who had just blown in from somewhere. They had all been Eddie's friends, and they were all just as sorry as The Native that Eddie was dead. But the hash and the nitrous oxide and three TV sets all going at once were all that they could handle right then. "Give me the hose," said Bert of the Crostons Rivals. Bert's rival, Norton, had been sucking on the laughing gas almost two minutes now, and Bert was getting antsy. His last flash had been all about time, it had taken him down the passageway to the very door of the rose garden, but as he was about to go in the flesh had started to wear off. Against his will he'd come reeling up the same passage he had taken down, and that was a disappointment. If he could have gotten the gas hose when he was supposed to, he could have made it back down in time to keep the dream intact, for even though he'd become conscious again the footprints still echoed clearly in his memory and showed the way back to the garden. But stupid Norton had the greeds and wouldn't let go of the hose.

(continued)

## Jigs & Fixtures for Limited Production

This book is a manual of tactics for making inexpensive jigs. It's intended mainly for machine shops, but it can be quite handy for anyone who has to make a number of similar parts, such as for a dome. Jigs are also handy when a single part has to be done with high accuracy. Anyone who is into making things are repairing various artifacts could learn a bag of tricks from the book. The author shows how to convert commonly available objects into jigs; a vice into a drilling jig. There's a chapter on making epoxy tooling. The language is non-technical, with most of the terms being defined. For most makers, it won't be bedtime reading, but will be a good reference when the problems get tough.

(Reviewed by Jay Baldwin)

## Jigs & Fixtures for Limited Production

Harold Sedick

1970, 136 pp.

\$10.00 postpaid

from:  
Society of Manufacturing Engineers  
29501 Ford Rd.  
Dearborn, Michigan 48128

or WHOLE EARTH CATALOG

## jigs & fixtures for limited production

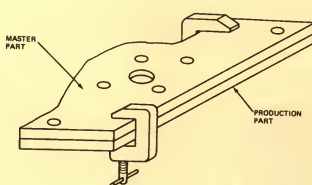


Fig. 2-4. Master part method of transferring hole locations.

If an item does not warrant special tooling, there may be an economic advantage in using the master part system. This system, as the name implies, uses a simulated or actual part fabricated to slightly closer tolerances than the intended product and used as a template or jig. When a master part is used as a jig for locating holes, the master and the part to be worked are clamped together as shown, and the hole locations are transferred from the master to the part with a duplicating punch. If possible, hardened bushings are inserted into the master part, making it possible to transfer holes directly by drilling. The addition of drill bushings improves accuracy and increases tool life.





**Don't buy the definitive Encyclopedia of Knots and Fancy Ropework. Buy Knots and Splices (95¢) if you want to graduate beyond tying your shoe into being useful with rope and string. Once that book gets you into working regularly with rope, move on up to Handbook of Knots and become a journeyman knot-tyer comfortable with cable and occasional fancy work. If you want to tell stories while you tie, or connect up with history and other possibilities, get The Ashley Book of Knots and start smoking a pipe. Now you're ready for Encyclopedia of Knots and Fancy Rope Work (includes far-out macramé).**

*Knots are profound things, you know.*

## Knots and Splices

**Percy W. Blandford**  
1962; 79 pp.; 80 good knots  
**\$0.95** postpaid

from:  
Arco Publishing Company  
219 Park Ave. South  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

For dragging, you can get your shoulder into a bowline at the end of the rope, but if someone is needed to help you, you have to make a loop in the rope without using its ends. This can be a *man-harness knot*. Take up enough for the loop (Fig. 4C), and start to make an overhand knot in it (Fig. 4D). Instead of completing the overhand knot, grasp the opposite side of the loop through the part-knot and pull it through (Fig. 4E). To keep the knot in shape while doing this, hold one part of the rope under your foot while pulling upwards on the other part, and outwards at right angles on the loop.

## THE ASHLEY BOOK OF

**KNOTS**

THE COMPLETE ILLUSTRATED GUIDE TO THE ART OF KNOTTING

CLIFFORD W. ASHLEY

A knot having been tied or projected, the next thing in order is to 'work' it, which means to draw it up snug while molding it into proper shape. The slack should be worked out very gradually. This is a matter of no less importance than correct tying, and often presents a more difficult problem, requiring both patience and practice. Carefully fair the knot, and, once having arranged the cord in symmetrical form,

## Ropework, Knots, Rigging

The definitive text is *Encyclopaedia of Knots and Fancy Rope*, by Hensel and Graumont available from the Cornell Maritime Press, Cambridge, Maryland. The Ashley Book of Knots is comprehensive and charming; however, the *Encyclopaedia* is comprehensive and *useful* (and it is a lot more expensive, but that's another story). I own Ashley and I liked it to do over again I'd buy Graumont. Also, the last time I checked the *Encyclopaedia* was \$12.00, or just \$2.00 cheaper than Ashley. Actually, all most folks will want is the *Encyclopaedia* and the *Encyclopaedia* is available from the Maritime. It handles every working kind of general use and then some. If it is splicing that is of special interest *Splicing Wire, and Fibre Rope*, by Graumont and Hensel is all you need (plus a few, 'n' a few more). I've spoken to several master riggers from Eleventh Avenue in Manhattan to Gloucester all of whom spoke highly and enthusiastically of the *Encyclopaedia*. It is in hard cover for \$3.00 also from Cornell Maritime. It is printed in a very nice, readable font. I can understand the constant use by greedy hands, a book that's a real

*Speaking of rigging, there is a terrific future for qualified riggers.*

Shi lifts all have their cables spliced and all the tent and net structures of the larger type currently on the drawing boards will have to use wire cable which must be spliced in order to maintain the strength specs (knotted cuts down as much as 50% wire bolts as much as 25% on certain strengths, a well executed transitional splice will leave over 95% strength). Rigging is a demanding and exacting craft with a long and honorable tradition. It may be the second oldest profession as rope (hemp) was one of the earliest invention of man.

On macrame', which I always thought was square knot fancywork, there is a store in Brooklyn, C.E. Herwig, where you can see the best of fancy ropework and get all the supplies you need like different size, quality, color twines. I think they're on Clinton Street in the Brooklyn Heights section.

Harvey Kalmeyer  
Taos, New Mexico

## Handbook of Knots

**Raoul Greumont**  
1945; 194 pp.; 428 good knots  
**\$2.00** postpaid

from:  
Cornell Maritime Press, Inc.  
Box 109  
Cambridge, Md. 21613

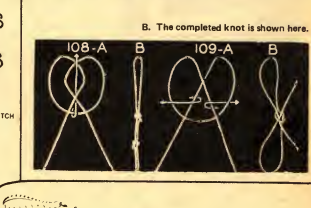
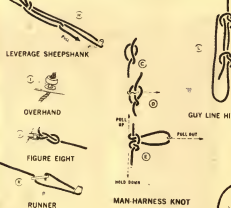
or **WHOLE EARTH CATALOG**

**Fig. 108 A:** The Single Fisherman's Knot is ordinarily used to tie gut, which is less likely to slip when tied with this form of knot than when joined with a reef knot or sheet bend. It is tied with the underhand loop on the left overlapping the underhand loop on the right in the manner shown. The bight is then pulled through as the drawn in line indicates.

**B:** Illustrates the knot after the operation has been completed. This knot is often called an Englishman's, true lover's or waterman's knot.

**Fig. 109 A:** The Tom Fool's Knot or Arizona Handcuff Hitches, also known as a Conjuror's Knot, is said to have been used as a rope handcuff in the early days of the West. It can also be used as a jar or pitcher sling. It is tied by forming a loop in the manner shown, with one part of the line crossing over and the other part crossing under the knot. The bights are then pulled through as indicated.

B. The completed knot is shown here.



## The Ashley Book of Knots

**Clifford W. Ashley**  
1944; 260 pp.; 3900 incredible knots

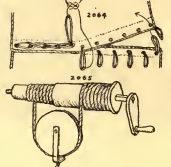
**\$16.95** postpaid

from:  
Doubleday & Co., Inc.  
501 Franklin Avenue  
Garden City, N. Y. 11530

or WHOLE EARTH CATALOG

145. To break a heavy cord or string, take a turn of the cord around the left palm. Revolve the left hand so the cord is twisted in front of the palm, and wind the standing part several times around the fingers. Wrap the end (which is longer than illustrated) several times around the right hand; hold everything firm and jerk stoutly.

My first impression was that the weakening effect of this harsh crossing was the important factor in causing the string to break invariably at this point. One of the "laws" quoted in dictionary and encyclopedia knot discussions is that "the strength of a knot depends on the ease of its curves," and of course a right-angle crossing provides the uneasiest curve that is possible within a knot.



2064. *Lotching* is an old method of attaching a dabbler to a jib or a bonnet to a fire and aft sail. Nowadays it is the method employed by circusmen in assembling the canvas sections of the tent. A series of eyelets in the upper section of the sail are opposite a series of loops, termed "keys," in the headpole of the bonnet. Starting at one side, a key is rove through the opposite eyelet and hoisted to the next eye. The next key is rove through its opposite eye and through the key that was first led. This process is continued until the center of the reef is reached. The process is then repeated, beginning at the other edge of the sail. The two center loops, being twice as long as the rest, are reef knotted together. Captain John Smith describes them as "six collered" or "lochered."

2063. The *Chinese* *simulatrix* is the grandfather of the present-day differential chain hoist. One end winds, while the other unwinds, and the right end of the barrel, being larger than the left, winds or unwinds a greater length of rope than the left end, with each revolution of the crank.

## Encyclopedia of Knots and Fancy Rope Work

Raoul M. Graumont, John Hensel  
1939, 1942, 1943, 1952, 600 --

\$15.00

**\$15.00** postpaid

from:  
Cornell Maritime Press  
Cambridge, Maryland 2

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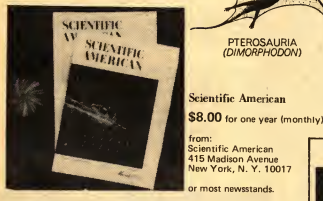
rope ladder



## Scientific American

Good old Scientific American.

—SB



SCIENTIFIC AMERICAN  
PTEROSAURIA (DIMORPHODON)

Scientific American  
\$8.00 for one year (monthly)  
from:  
Scientific American  
415 Madison Avenue  
New York, N. Y. 10017  
or most newsstands.

## New Scientist

New Scientist is the best evidence we've seen that there are new scientists in the world, young, politically aware, irrelevant, active. Every week here's yet another New Scientist (if you get behind reading, it's hopeless), full of actual news, critique, and gossip of the research world. The magazine is British, so you get perspective on U. S. accomplishments (flourish nonetheless), and report of world-wide activities unreported in most American journals. The Ariadne column is a gem.

[Suggested by Steve Baer]

—SB

## New Scientist

\$16.00 for one year (weekly)

from:  
New Scientist  
128 Long Avenue  
London W. C. 2



A weird case coming before the court at Oakland, California, results from the discovery that a computer was emitting more data than it had been asked for. After investigation police suggested that an unauthorized program had been run through the computer at the coded command of another computer belonging to a different company. The police obtained a warrant to search for electronic impulses in the memory of the suspect machine. The result (involving trade secrets) and its outcome should make legal history.

## Science

I have to acknowledge I've gotten more useful tips from this magazine than any other technical or scientific journal.

—SB

The fragile environment, ecology, and pollution problems have recently become matters of concern everywhere. My own personal explanation for this outburst of interest may be peculiar to myself, but I would like to know whether my explanation sounds a responsive chord in the minds of others. I date my own awakening of interest in man's environment to the Apollo 8 mission and to the first clear photographs of the earth from that mission. My theory is that the view of the earth from that expedition and from the subsequent Apollo flights have made many of us see the earth as a whole, in a curious way—as a single environment in which hundreds of millions of human beings have a stake. One view in particular is awe-inspiring—with Africa in the foreground and the whole profile of the Mediterranean very clear. One starts at the whole Mediterranean, looking from outer space much as in an atlas, but not as a desolate. Much of our commonest thought of history centers around that little sea, a mere patch of the hemisphere, which seemed to its inhabitants to be the whole world.

Looking at the blackness beyond the sharp blue-green curve, trying to see even the place where the thin atmosphere and the solid earth met, the curious word "fragile" comes to mind. To be on the earth and think of it as fragile is ridiculous. But to see it that way and to compare it with the deadness of the Moon! I suspect that the greatest lasting benefit of the Apollo missions may be, if my hunch is correct, this sudden rush of inspiration to try to save this fragile environment—the whole one—if we still can.

John Caffrey  
American Council on Education  
Washington, D. C. 20036

126 Science Industry

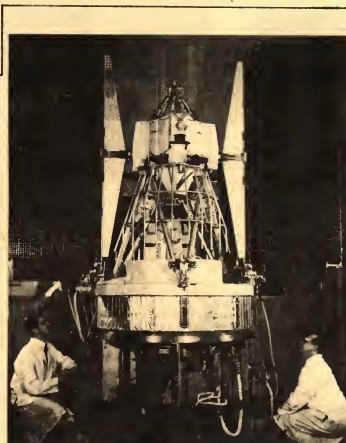
If we look at man's use of energy, the future of fossil fuels or fusion is measured in centuries; only deuterium or sunlight can carry us through a long history of industrial life. Our history is now marked on a time axis by one single pulse of fossil energy, rising from the axis and falling back to it again in about a millennium. We are in the first fourth of that pulse today. Right now men add as much heat to the earth's surface as the natural flow of heat by convection

and conduction from the earth's hot interior does, and we face a tenfold rise in man's activities. For the first time in so central a parameter as energy men will have worked on a geologic scale. (Of course, the sun sends 1,000 times more heat to the earth's surface; we shall not cook ourselves that way!) Still, our myriad stacks and tailpipes aggregate to more than Krakatoa, Elina and the Valley of Ten Thousand Smokes.

## Globe-Trotter's Peril

The painful, nauseating but feverless disease known as "traveler's diarrhea" has often been blamed on a change in water or climate, on chilled drinks and on other dietary indiscretions. Its actual cause now seems to be known; it appears to result from the sufferer's ingestion of the intestinal bacterium *Escherichia coli*, but a bacterium that belongs to a strain different from those he already harbors.

## Murder at Thank God Day



"O thou, who in former times didst wondrously magnify our aspirations, that the Marxists might be humbled; cut not back the sentence of thy tyrants in the days of tightness which are upon us; but grant, we beseech thee, a renewal of thy support, that we may reap such a harvest of peaceful salt and spinnings-off as will move the people to glorify thine administration. Amen."

Grassland used as a car park can easily degenerate into a quagmire. British Roads Ltd. has made a one-inch mesh polypropylene net which can be used as an inexpensive method of stopping land from becoming boggy and rutted through by cars, caravans etc. The net is spread over grass and pegged down. The grass will grow through the net, and can even be moved without damaging the net. The net has been tried out at Sywell Aerodrome near Northampton and has helped keep the airport open under conditions which would previously have led to damage to the surface. Polypropylene nets might also be useful on river banks and they could help stabilize other earthworks and protect freshly seeded areas.

If we were to judge by the sales of Spock's books, we would have to conclude that many parents of nonactivists must have put the Spock advice on their bookshelf, if not on their practices. But the studies of young activists suggest that their parents (often trained in, or well read in, social science fields where Freudian theory and Spock's advice held considerable sway) reacted more favorably to this advice than did the parents of nonactivists. Parents of activists expressed more frequently than others a belief that their own parents had been too harsh, too remote, too unfriendly, too strict, and too arbitrary. They indicated that they hoped to make things different for their children, and they expressed a belief in the efficacy of Spock's advice. Concomitantly, activists, more frequently than nonactivists, described their parents as lenient or not strict.

Thus the suggestion is that the young activists of the 1960's were "Spock marked." More pertinently, several studies in child psychology suggest that the low-extended methods of discipline advocated by Spock tend to foster close identification of the child with the parent and to corresponding acceptance by the child of his parents' values and expectations.

A contradiction of popular beliefs about activists is indicated here, for this evidence suggests that the young activists of the 1960's, far from being the rampant deviants that they were often said to be, were, in fact, conformists. They were conforming, through identification, to a model presented by their parents. . . .

When we look to the studies for such signs of psychopathology as excessive anxiety, neurotic preoccupations, general paranoid beliefs, delusional thinking, diminished self-esteem, loss of self-control, excessive dependency, flattened affect, irresponsible interpersonal relations, lack of drive, hysteria, depression, extreme hostility, and psychopathy, we fail to find that such behaviors were any more common among activists than among comparable samples of nonactivists. Moreover, in the direction of positive mental health, the evidence indicates that activists were relatively high in self-respect, self-esteem, intellectual orientation, social responsibility, self-reliance, and relatively low in ethnocentrism, possessiveness, and dependency.

Internal pollution is being brought about in three ways: by the ingestion and inhalation of the products of our already polluted external environment; by our daily intake of chemical additives and impurities pre-packed into the food we eat and drink; and by the vast number of medicaments with which we regularly dose ourselves—more often than not unnecessarily. That some realization of the danger of this last factor is dawning was conveyed to me recently when in the United States. Among the seemingly endless mundane daily television commercials I was greatly surprised to find one sponsored by the Blue Cross-Blue Shield Health Insurance Company, going something like this: "Got a headache? Why wait? Take an aspirin. . . Indigestion? Quick! An antacid. Can't get to sleep? A pill will help you. . . Feeling down? Take . . . The voice fades— . . . The device concludes with slow measured emphasis: "Have you thought that you might be killing yourself?" For once, advertising was used to say something that showed not only unexpected foresight, but something meriting constant repetition.



There is a need, a transient need, a violent need for being just yourself, resting, recreating, talking in your own terms about what you have learned from all the cultures, scientific and non-scientific, before you and around you. During that period you want to be almost alone, with just a few friends. You want to be undisturbed. You want to be free to think for an hour at a time, or three hours at a time, or for two days or two weeks, if possible, without interruption. You don't want to drive the family car or go to parties. You wish people would just go away and leave you alone while you get something straight. Then, you get it straight and you embody it, and during that period of embodiment you have a feeling of almost divine guidance. Then it is done, and suddenly, you are alone, and you have a need to go back to your friends and the world around you, and to all history, to be refreshed, to feel alive and human once again. It is this interplay between all that is richly human and this special, concentrated, uninterrupted mental effort that seems to me to be the source, not only of science, but also of everything that is worthwhile in life.

Edwin H. Land

## Free reprints

Bill Dickinson says you can always get free reprints of articles in Scientific American, New Scientist, etc., by writing to the authors. They all have hundreds of copies.

## Popular Science

Of the three, Popular Science, Popular Mechanics, and Mechanics Illustrated, consistently the somewhat better is Popular Science. It's a good source for current applied science reporting and basic-technology. Most of the cool sources we list advertise in the magazine. —SB

[Suggested by Jay Baldwin]



Popular Science

\$5.00 /yr. (monthly)

from:  
Popular Science  
Subscription Department  
Boulder, Colo. 80302

## Landline shortwave stations you may hear

Frequency (mHz)	Station	Amplification
3,900, 4,365	Unknown	CIA
2,440, 3,900, 4,365	Radio Liberated Army	Viet Cong
11,997, 9,535	Radio Sofia	Bulgaria
9,555, 11,410	Kiss Me Honey (music jammer)	Radio Baghdad
8,340	Radio Portugal Libre	Basque Region of Spain
13,700, 13,300, 13,500, 15,100	Radio Euzkadi	Radio Moscow
17,700, 6,950, 7,050	Radio Espana Independiente	Europe, N. America
1,406, 7,305	Radio Liberated, LaVas Anti-Com	Europe
9,300, 11,865, 15,050	Ministres de America	South, Central America
1,157, 6,000	Radio Americas	Central, South America
6,135	Radio Havana	Central, South America
10,030, 10,015	Radio of S. Vietnam, Front for Liberation	Central, South America
7,345	Free Transmitter of Czechoslovakia	S. E. Asia
		Europe, North America

## Picture fuddling by computer

Can you identify this face? It's a well-known President who feeds the slaves and was shot in Burt's theatre. Still stumped? Try viewing it at arm's length, or squinting, or jiggling the page rapidly. This picture represents a Bell Labs experiment to learn the least amount of visual information a picture can contain and still be recognizable—of some concern to designers of Picture-



phones. Here a computer has given a portrait into 200 squares, each rendered in an even tone of gray along an intensity scale from one to sixteen.

## Have parka, will travel

Are you a post-doctoral scholar, graduate student, or upper-division undergraduate "between 20 and 30 years old, of even disposition, with some knowledge of electronics"? Would you like to train for a one-year stint manning scientific instruments in the fields of gravity, astrometry, meteorology, or terrestrial magnetism? And would you, incidentally, like to spend that year at the South Pole? Then there just might be a job for you. Inquire of the Institute of Geophysics and Planetary Physics, U. of California, Los Angeles 90024. Hurry!

## Popular Mechanics

Equal Time for Responsible Spokesmen . . .

Gentlemen:

I have not had the pleasure of seeing your catalog, nor of communicating with you previously. I have, however, seen the page from the catalog in which you say *Popular Science* is "somewhat better" than *Popular Mechanics*.

This doesn't anger me, because you have a right to your opinion. But it does concern me, and I'd be interested in knowing what caused you to arrive at such a conclusion.

I have been the editor of both *Popular Mechanics* and *Popular Science*, so I know the editing philosophies of both magazines. I won't take anything away from *Popular Science*, which continues to be an excellent magazine. (Their star contributor, Dr. van Braun, is a holdover from my regime.)

However, *Popular Mechanics* has long been Number one in circulation, including newstand, and in advertising. When I became editor of *Popular Mechanics* five years ago, I considered it a step upward.

We think we do a better job in reporting and illustrating science, inventions, aerospace, exploration and the like. We're sure we do a better job on ecology (including a monthly "Pollution Fighters Newsletter"), outdoor recreation, home repair and workshop ideas.

Although *Popular Science* has recently adopted the slogan, "The What's a New Magazine," and now groups all new products in an 8-page section, I believe an item-by-item count would show that *Popular Mechanics* runs at least as many new items, scattered through the magazine. And we have come up with such important "scops" in the past year as General Electric electric grid-iron tractor, Perry Submarine's 2-man "Shark Hunter," Sylvania's Magibuck flash bulbs, and Polaris's recently patented shutterless camera.

I am sending you several recent issues of *Popular Mechanics*. I hope they will cause you to change the opinion expressed in your catalog. If they don't I'd still be interested in your reactions.

Sincerely yours,  
Robert P. Crossley  
Editor

*Popular Mechanics*  
Box 645  
New York, N.Y. 10019  
\$5/yr., monthly

POPULAR MECHANICS

## Product Engineering

Roy Sabern pointed out the main satisfaction of reading *Product Engineering*: In the usual magazines such as *Popular Science*, everything has the tone of "I wish they'd make . . .," whereas in *Product Engineering* it's "We are making . . ." The magazine has good reporting and excellent editing. Increasingly it is going beyond the question of how to make stuff into why make stuff. Departments include Research & Technology, Mechanical Design & Power Transmission, Hydraulic/Pneumatic Power & Control, Materials & Manufacturing, Product Planning & Management, and the Engineer & His Profession. —SB

Product Engineering

Product Engineering

\$15.00 for one year (biweekly)

from:  
Fulfillment Manager  
Product Engineering  
P.O. Box 430  
Hightstown, N.J. 08520

## Product Development and Design

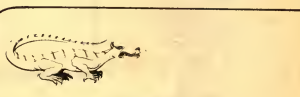
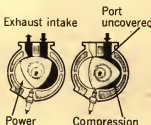
Product Development and Design monthly magazine, 200-400 items reviewed describing each month, 600 or so ads for unusual items related to developing all sorts of products. Info and samples are available on check-off card type access system. Subscription free to qualifiers which must mean anyone in any type research; they sent it to us and we seem mainly to be researching our own heads and we didn't ask for it. It is really a mind blow for the "mechanically inclined" or short-cut firm. In the last few years everything you ever thought would be a helpful little gadget or variation has been manufactured and is available. This is one place you'll find out about it. Especially if it's new. It must be invaluable to product people cause it's good access to technology's rate of growth and the movement or dynamics of it in the small item part of the Register. It really seems to supplement the Thomas Register. It is full of useful stuff often available in sample form for free or a small charge to stimulate use of the item and a market for it. Product Design & Development, Bala Cynwyd, Pa. 19006. Reader (subscriber) qualifying application form on request.

Recommended by  
Ron Williams  
New York, N.Y.

## Things That Go Bump

The center of the galaxy may be emitting intense bursts of gravitational radiation, according to evidence reported at the recent annual meeting of the American Physical Society by Joseph Weber of the University of Maryland.

If Weber's detectors are indeed responding to gravitational radiation, what could be the significance of emissions predominantly from the center of the galaxy? Einstein's general theory of relativity predicts that gravitational waves could be produced by matter that is accelerating with respect to the observer. "Evidently," says Weber, "matter in the center of the galaxy is either collapsing or being rearranged on a grand scale."



The hypnotism man was a little old sardine-fed Jew with a goatee who stood with his hands folded at his chest like a teacher about to say "now children." He spoke in a wonderfully deep and resonant voice, but he wasn't nearly as handsome and pleasant to look at as Billy Graham. So The Native, a dead-end and prankster that he was, decided to rearrange things a little. What he did was fack up the picture image on channel four so that you could hear the hypnotism man without seeing him, while you looked at Billy Graham on channel three of the top left TV. As a kind of sub-plot, some bulldozers were hacking down a mountain in a strip-mining operation in Kentucky on channel seven of the TV next to Billy Graham.

"Far out," said Reed.  
"Groovy," said Bert of the Crostonville Norton.  
"Move your fucking legs," said Bert's rival, Nelson.  
After some stirring and shifting around and some goings and comings to the bathroom, everybody settled back onto the mattress for another half hour of good fun.  
"Good afternoon," said Billy Graham. "And welcome to today's session in self-hypnosis. I hope you've done your homework since yesterday, because today's lesson will require considerable strength of mind if you are to complete it successfully. You will remember that yesterday I asked you to practice being very quiet, at all yourself, for at least half an hour. I hope that most of you did that, for you will find, as you continue in self-hypnosis, that several minutes a day of simple quiet will do you pretty to your capacity to count yourself into a trance. Being quiet for a few minutes each day is like planting a little seed in your mind that can grow and grow all through the day, and help you to stay calm and alert. So if you did not practice since yesterday's session, I urge you most strongly to sit quietly for at least half an hour before tomorrow's session. (continued)

Technology  
Industry 127



## Handbook of Chemistry and Physics

Among handbooks this one is unusually wealthy in basic information. Its 6-figure math tables are the standard (they're obtainable separately: \$6.50 from Chemical Rubber). Its chemistry and physics tables constitute a comprehensive inventory of invisible effects. It doesn't teach you how to use or even read the inventory, but if you know how, here's the know-what tool chest.

[Suggested by Lloyd Martin]

### Handbook of Chemistry and Physics

Robert C. Weast, ed.  
1919... 1969  
(49th Edition): 3604 pp.

\$24.95 postpaid

from:  
The Chemical Rubber Co.  
18901 Cranwood Parkway  
Cleveland, Ohio 44128  
or WHOLE EARTH  
CATALOG

## WATER AGAINST AIR

Temperature °C	Surface Tension dyne/cm	Temperature °C	Surface Tension dyne/cm	Temperature °C	Surface Tension dyne/cm
-20	72.9	10	72.05	80	69.56
-10	73.4	20	71.75	90	68.11
0	75.6	30	71.4	100	66.4
10	74.23	40	71.05		64.5
		50	70.7		62.4

## INTERFACIAL TENSION

Surface Tension at the Interface Between Two Liquids  
(Both liquid saturated with the other)

Liquids	Temperature °C	$\gamma$	Liquids	Temperature °C	$\gamma$
Benzoic-Mercury	20	357	Water-Nitrobenzene	20	31.0
Ethyl acetate-Mercury	20	259.40	Water-Toluene	20	28.1
Water-Carbon tetrachloride	20	45	Water-Mercury	20	485.0
Water-Isobutyl alcohol	20	10.7	Water-Cyclohexane	20	35.0

## Cheaper Handbook

You buy the CRC Handbook of Chemistry and Physics and show the standard price of \$24.95.

I understand that CRC offers the Handbook each fall through college science departments at a great reduction. Last December I ordered the 50th edition for \$8, and I suspect that 50¢ of that was a contribution to the local chemistry students society. It is stamped "college edition" but as far as I can tell contains all the standard contents.

If this is indeed an annual CRC offer it is certainly worth waiting for.

Deborah Young  
San Diego, California

## Machinery's Handbook

If you make things out of metal you need Machinery's Handbook. This thick, comprehensive guide to shop and engineering practice was originally designed to fit in the tall center drawer of a machinist's chest. Machinist's chests have stayed the same size, but the shipping of metal has become more and more complicated. Machinery's has coped with the squeeze heretically; the current (18th) edition contains 2293 pages printed on fine India paper, and it still fits the drawer. You can find in it things like tap drill sizes for 3 A.S.E., metric, and Whitworth threads, what welding rod to use for which metal, and how much weight you can hang on a rope if it goes around a lat (or thin) barrel. You can also look up logarithms, area, volumes, and centers of gravity, and learn how to design helical gears, replace bearings, grind a lathe bit, and do many other useful and not-so-obvious things. The book is divided into thirteen main sections, indexed, thumb-indexed, and bound in tough, satisfyingly archaic industrial green with gold stamping.

[Suggested and reviewed by  
Dr. Morton Grossman]

## Machinery's Handbook

1914... 1970: 2293 pp.

\$19.00 postpaid

from:  
Industrial Press, Inc.  
200 Madison Avenue  
New York, N.Y. 10016

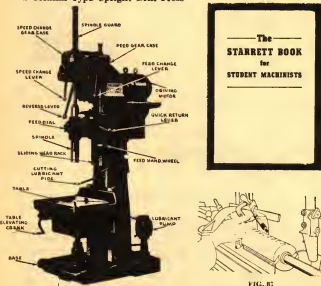
or WHOLE EARTH CATALOG

## The Starrett Book for Student Machinists

This is an excellent reference and introduction to machining. It can be used in place of the Machinery's Handbook by many people, although it does not pretend to replace it. Chapters like: Reading Working Drawings; Facts About Fits; Drills and How to Use them; Jigs and Fixtures; and Lathe Work. The book is well bound and small, making it an easy volume to keep.

[Suggested and reviewed by Fred Richardson]

## Box Column Type Upright Drill Press



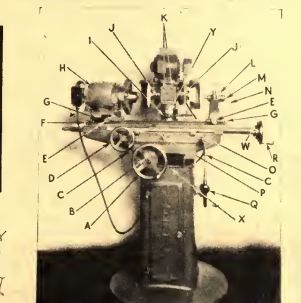
## The Starrett Book for Student Machinists

The U.S. Starrett Co.  
1941... 1952: 184 pp.

\$2.25 postpaid

from:  
The U.S. Starrett Co.  
Athol, Massachusetts 01131

or WHOLE EARTH CATALOG



## The Tools and Rules for Precision Measuring

A good basic book for "mechanics, hobbyists and home workshop owners." The title describes it well. Being a Starrett publication, it naturally shows only Starrett tools, but the information is good for almost all makes. Its information is primarily on Micrometers, Dial Indicators and Gage Blocks, although it covers other tools briefly. Has several useful tables in the back.

[Suggested and reviewed by Fred Richardson]

In effect, a micrometer caliper combines the double contact of a slide caliper with a precision screw adjustment which may be read with great accuracy. It operates on the principle that a screw accurately made with a pitch of forty threads to the inch will advance one-fortieth (or .025) of an inch with each complete turn. As the sectional view shows, the screw threads on a spindle revolve in a fixed nut concealed by a sleeve. On a micrometer caliper of one inch capacity, the sleeve is marked longitudinally with 40 lines to the inch corresponding with the number of threads on the spindle. Every fourth line is made longer and is numbered 1, 2, 3, 4, etc. to indicate one-tenth inch, two-tenths, etc. while other lines are staggered for easy reading.

## The Tools and Rules for Precision Measuring

The U.S. Starrett Co.  
1955: 80 pp.

free

from:  
The U.S. Starrett Co.  
Athol, Mass. 01331



Man is a tool-using animal. Weak in himself and of small stature, he stands on a base of some half square foot, has to stride out his legs last the very windsuppant him. Nevertheless, he can use tools, can devise them, with these the granite mountain melts into light dust before him; seas are his smooth highway, winds and fire his unwearied steeds. No where do you find him without tools. Without tools he is nothing, with tools he is all.

Thomas Carlyle (1795-1881)

## GEOMETRY

Geometrical Constructions

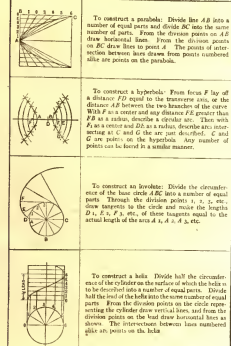


Table B - Approximate and Exact Values of Logarithms

N	1	2	3	4	5	6	7	8	9
0.1	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.2	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.3	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.4	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.5	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.6	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.7	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.8	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
0.9	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706
1.0	9.5003	9.5598	9.6190	9.6781	9.7370	9.7957	9.8542	9.9125	9.9706







Last month, when I visited you in Menlo Park you invited me to write about inventing, and what I would have liked to read that might have been helpful when I started inventing 15 years ago.

I'm enclosing some material on my most recent work, a so-called "patent network" in which a direct relationship exists among four inventions. Each of the inventions is illustrative of a different kind of invention in the sense that each was arrived at in a different way:

The SunBird kite was developed accidentally in an effort to work out a method of presenting kites from diving out of control. (An example of trying to invert B and coming up with d.)

The compression tension kite that turned into a cabana is an example of simply recognizing that something that my hands had done was an invention.

The stressed skin structure is an invention which I regard as incredible insight (except that, in retrospect, it is the logical result of a claim in my compression tension patent).

The modular building system was a deliberate attempt at compromise, an effort to combine a multiplicity of stressed skin modules into a cohesive unity, but the selection of the octant as the basic module was intuitive.

Most investigators of the "creative process" seem to agree that invention is non-sense, a subconscious, alogical activity which is the unique output of the human random-access memory when triggered by appropriate stimuli. It's nonsense when it happens, but after the fact it makes very good sense indeed.

Since the memory is involved it follows that the broader and deeper the experiences recorded in the memory, the greater the arsenal which can be drawn upon by the subconscious for its synthesizing activity. A rather long-winded way of saying, "if you're going to invent, it's a good idea to have a broad understanding of how the real world is put together, how things work; how things are made, and how the hands and their extensions, tools, make them."

The best inventor I know is Mother Nature. She holds most of the basic patents, (maybe all of them), so perhaps evolution is one way to get the job done.

Another way is accident. I've heard it said that an average chimpanzee turned loose on a typewriter, would eventually turn out every word in the Bible, and I suppose that his cousin, turned loose in my workshop, would have eventually put together both the SunBird Kite and the Modular building.

I just couldn't wait. Time's growing short.

Don Gellert

Kit is \$6.00, and can be purchased from  
Don Gellert  
Box 245  
Trujillo Alto  
Puerto Rico 07060

During the research which preceded final development of the SunBird, the inventor explored the work of Alexander Graham Bell, (who was a pretty serious kite flyer himself), and developed a compression-tension modification of Mr. Bell's tetrahedron kite. While the structure was not notably successful as a kite, a pair of Japanese took up residence in the prototype, and led the inventor to the development of a new modular housing system on which three patents have been issued during the last 18 months.

Figure 3 shows the fabric tetrahedron as modified into a compression tension structure.

A variation of this structure, using a curved spine and semi-rigid surfaces (instead of fabric surfaces) without the external compression members is shown in Figure 4.

Figure 5, an interlocking dome system using the same module.

#### A FULLY CONTROLLABLE TETHERED GLIDER

If you hear talk about a kite that can: write your name in the sky, dive, loop, spin, how on command, plunge into the water swim around and take off again, fly in formation, dance to music... and stuff like that the gadget that actually performs that way is a SunBird Aerobatic Kite.

A two-part invention which was developed more or less by accident, the SunBird consists of a delta wing kite, with independently movable wings, and a control reel that handles each of the two control strings and allows them to be payed out or reeled in simultaneously.

Kite flying is a sport, and the SunBird is a piece of durable precision engineered sport equipment. It takes skill to use it, and time to develop that skill but after a dozen flights or so, when you've mastered the control system it's the nearest thing to a free-eating kite there is.

While the SunBird Kite included in the kit is considered to be the best controllable kite ever developed, the SunBird Control can be attached to almost any kite, and instructions for attachment to other kites are included together with full instructions for handling the Control System.

These designs have been rendered in fabric, urethane-covered fabric, cardboard, aluminum and urethane covered aluminum, free-standing urethane, plywood panels, steel-lath-and-concrete. The largest span to date is 26 feet (for a single module and was fabricated as a fabric standing urethane dome).

The advantages of the system lie in its power to develop, out of almost any surfaces, extremely strong, thin shell structures with curved surfaces imply.

Readers interested in experimenting with the structure are invited to correspond with the inventor. Background theory material and representative designs are being assembled for reproduction and will be available at \$2.00 per copy together with a license to erect experimental structures. Commercial applications may be arranged on an individual basis.



Figure 1

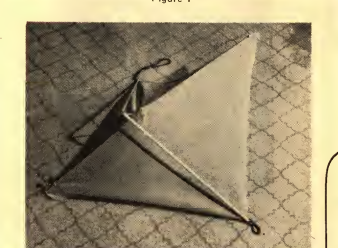


Figure 3

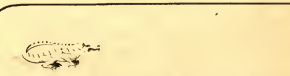


Figure 4



Figure 5

Figure 2



"As your body has settled into deep rest, your mind has been relaxing too, emptying itself until now it is cool and clear and free of all images except those I will suggest to you with my voice. Your mind is like a well with absolutely nothing on it, no shape, no form, no color. It is empty and at rest, ready to recava the image of three boxes, three simple boxes sitting side by side in the middle of the empty space of your mind. The boxes are all the same size, and they are sitting in the same positions, with their fronts toward you, so that you can read the words written on the front of each box. Except for these words, the boxes are just alike, three neat boxes, very simple and clean of line, sitting next to each other in your mind. On the front of the box on the left is the word 'Past'. The box on the right is labeled, 'Future', and the box in the center is labeled 'Present'. Keep seeing all three boxes sitting there together, now, but pay particular attention to the box on the left, the 'Past' box. Think about that box a minute, and think about the word 'past'. And as you think about the word 'past' begin to put into the box all those things in your mind that you ordinarily associate with the word 'past'. All your memories, all your recollections, all your backward longings, everything in your mind that has anything at all to do with the past put it into the box on the left, and when you have done this, close the lid.

"Now you have closed the lid on the box marked 'Past'. Continue to see all three boxes in a row, but turn your attention now to the box on the right, in particular, the one marked 'Future'. Think about the word 'Future', and as you think about it, begin to fill up the box on the right with all those elements in your mind that have anything at all to do with the future. All your ambitions, all your plans, every forward longing, every expectation, the very concept of the future, put in the box now, and when you have it all in, close the lid. The past and the future are now closed. You don't have to think about either of them again. The three boxes are still there, side by side in your mind, but the only one you are interested in now is the one in the middle, marked 'Present'. Turn all of your attention to the box in the middle marked 'Present'. Concentrate your entire mind on everything you can grasp that belongs to this particular present moment of your life. Everything that is, now, put in the box marked 'Present', and watch, notice how the box in the middle is beginning to grow in size. You continue to put in it everything that you can possibly get hold of in this moment, this now, but as you do the box is growing, getting larger, it is swelling in length and height and breadth. You continue to put in it all the elements of the here and now that you can get hold of, but as you find them and put them in, you discover more and more of the present that should be included in the box.

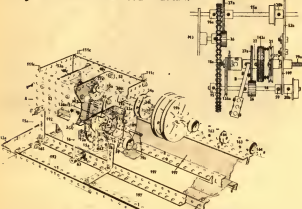
"And as the middle box grows, the other two boxes on either side get smaller and smaller in proportion. They get smaller and smaller as the box in the middle gets larger and larger. And gradually the box in the middle begins to crowd the other two boxes out of your mental picture. Their place is being consumed by the box in the middle, which you continue to fill with every stray possibility out of the world of here and now. The two boxes on the sides are so small now you can barely see them. And now they are gone.

"Now there is only the box in the middle, the 'Present' box, still swelling, still growing, getting larger and larger with every breath you breathe.

"And now the edges of even this box begin to disappear into the limits of your picture. It is beginning to lose its form, its identity as a box, it is turning into pure space now, pure light, and inside it is every aspect, every particle of now, of here, of this single, living breathing, on-going instant of your life."



Meccano, originated by Frank Hornby, a Liverpool inventor, in 1907, was the prototype miniature metal construction system. American children are familiar with Erector, European kinder with Trix and Marklin, but they all spring from Hornby's original brainchild. Meccano is sold today from open stock, and is in series ranging in price from \$2.00 to \$160.00. There are hundreds of extra specialized parts available, and power units including two sizes of clockwork motors (these are genuine governor-controlled drives, not flimsy windups), four different electric motors operating on 4½ volts D.C. to 240 volts A.C., and a reversing steam engine. Meccano gears are machined brass with teflon; most other parts are stamped and plated steel. Auxiliary sets are available for making gear transmissions, mechanisms such as intermittent drives, and generators. Plans for many complex models are available from the factory, and there is a monthly Meccano Magazine with projects such as regulator clocks described in detail.



The point of all this is that if you want to breadboard an invention or a machine, Meccano is a tested, economical way to do it. Many laboratories in England carry stocks of Meccano parts to build test models with. Meccano is available in a few stores, such as Sears, in the United States, but you are better off ordering it from major British toy suppliers such as Beatties of London, 15 Broadway, Southgate, London N. 14, or Mantley's, Lombard Road, Merton, London S.W. 19. After more than half a century Meccano is still a viable mechanical system. It's also a pretty good toy. (Suggested and reviewed by Dr. Morton Grosser)

## Formulas, Methods, Tips and Data

Toothpaste, soap, detergent, chemical cleaners for drainpipe & toilet bowl; paint stripper; radiator quick flush; paints, dyes all have cookbooks, electric mixer & stove & mixing bowl built into the cycle between your natural resources and your products when you brew them at home. Some things like soap can be better quality than you buy. Some are less expensive. Unites savings at the supermarket. And even if you go back to shelf, ware at some point in the future you do so with different eyes.

(Reviewed by Doug Gunesch)

## Formulas, methods, tips and data

Formulas, Methods, Tips and Data for Home and Workshop  
Kenneth M. Sweeney  
1989: 391 pp.

\$7.95 postpaid

from:  
Harper and Row Publishers  
80 East Street  
New York, New York 10016

or WHOLE EARTH CATALOG

**BASIC SOAP FORMULA.** To make 9 ounces of pure, hard, smooth soap suitable for toilet, laundry, or soap flakes, follow this simple recipe:

Cold water	2½ pints
Pure flake lye	113-oz. can
Clean fat (tallow or lard, or combination)	6 pounds
6 pounds of fat is about 6½ pints of liquid fat.	

Slowly pour the lye into the water in a Pyrex, iron, or enamel vessel (Caution: Don't spill lye solution on your skin, clothing, or furnishings as it is extremely caustic). Stir until the lye is completely dissolved. Then let it cool to the correct temperature as shown in the table below.

Melt fat to clear liquid and let cool to correct temperature as shown in table, or until the fat offers resistance to the spoon. Stir occasionally to prevent crystals from forming. Pour the lye solution into the fat in a thin, steady stream with slow, even stirring. (Rapid addition of lye solution or hard stirring is apt to cause a separation.) A honey-like consistency is formed which becomes thick in from 10 to 20 minutes.

Meccano is made far more useful through G. M. Morris, 248 Woolwich Road, Abbey Wood, London SE2, England. He publishes various indexes of the vast Meccano literature, edits a quarterly magazine, and provides photocopied access to all the Meccano plans, manuals and magazines of the past ½ century.

Brian Williams  
Aurora, Ontario

## Automat Engineering Sets

Mechanical prototyping kits. Frame system, gear systems, and variable speed motors. Presumably precise; not cheap (kits \$275-\$320).

—SB

(Suggested by Alan Kalker)

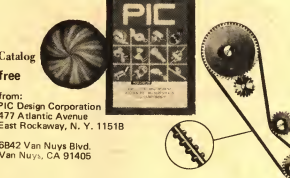
R. C. Distributing Company  
6001 Dexter St.  
Commerce City, Colorado 80022



## PIC Design Corp.

Precision components. Gears, shafting, clutches, dials, differentials, and a precision 522-page catalog.

(Suggested by Fred Richardson)



Catalog  
free

from:  
PIC Design Corporation  
477 Atlantic Avenue  
East Rockaway, N. Y. 11518  
6842 Van Nuys Blvd.  
Van Nuys, CA 91405

## Henley's

Henley's was first published in 1907, and is a fascinating mixture of obsolete and still useful formulas and processes as advertised. Some are useful but obscure (formulas for fire-eating). Some are useful but who cares? (formulas for furniture glue not as good as what you can buy). Some are frighteningly incomplete (the section on explosives). Some are bizarre (a hair pomade containing Spanish Fly). Some you can get better elsewhere (corrosive glasses). Some are funny (remove frost from windows by swabbing them with sulfuric acid). Many brews require chemicals not easily available, but sources are given (mostly in New York) and there is a glossary of outmoded terms. Some of the formulas might be of historical interest (how to make harness grease). It's not a pretty book; every copy I've seen has printing flaws, probably due to worn plates. I've been happily thumbing through my copy now and then for many years. I've never used any from it.

(Suggested and Reviewed by Jay Baldwin)

Pour the thickened mixture into a wooden box that has been soaked in water and lined with a clean cotton cloth wet in water and wrung nearly dry. Place in a protecting pan. Cover with a board or cardboard, then with an old rug or blanket to retain the heat while it is texturing out. Leave it alone for 24 hours.

To remove the soap from the mold, lift it by the ends of the over-hanging cotton lining. Cut into bars by wrapping the soap with a fine wire and pulling the wire through. Place so air can reach it, but avoid drafts and cold. Aging improves soap. In 10 to 14 days it is ready for use.

**TEMPERATURE TABLE.** Follow these temperatures closely:

Type of fat	Temp. of fat.	Temp. of fat, soy.
Sweet lard or other soft fat	98 degrees F	77 degrees F
Half lard and tallow	105 degrees F	83 degrees F
All tallow	125 degrees F	93 degrees F

Unistrut is great stuff. You can make houses, furniture, partitions, stage sets, boat trailers and just about all sorts of things out of it, and can take them apart later and use the Unistrut again. It comes in several sizes, in several metals and finishes, and is completely adjustable. I've used it for such diverse things as tables, store interiors, pack frames, animation stands and camera dollies, telescopes. Unistrut is distributed nationwide, but locally there may be competitors that offer cheaper prices and different finishes. Good for space frames such as Fuller's octet truss.

Similar in use but not in sophistication is "Giant Erector Set" slotted angle that goes under a number of trade names. It's usually called "slotted angle" or "metal lumber" in the Yellow Pages. It's particularly good for shelving and camping bus interiors, where 2 x 4's are not really suitable. A good brand is AIM (for list of distributors, write Tom Jackson, Interlake, 4903 Pacific Blvd., Los Angeles, CA). It costs about the same as finished lumber and takes no skill at all to use. Comes with bolts and nuts and a simple table to calculate loads. Also Good Stuff.

Unistrut Catalogs

(Suggested and reviewed by Jay Baldwin)

free

from:  
Unistrut Corporation  
4118 South Wayne Road  
Wayne Michigan 48184

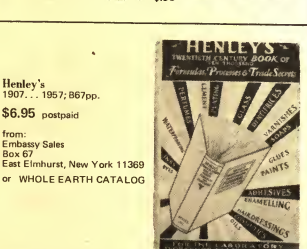


## Dexion

Dexion is another brand of metal lumber. —SB  
(Suggested by Rick)

Dexion  
39-27 59th St.  
Woodside, N.Y. 11377

3" x 3" galvanized steel  
hinges, bolt directly to  
Dexion Slotted Angle 140, 160,  
225 and 260 sections  
Each \$95



## Henley's

1907. —1957; 867pp.

\$6.95 postpaid

from:  
Embassy Sales  
Box 67  
East Elmhurst, New York 11630  
or WHOLE EARTH CATALOG

**Anti-Freezing Solution for Automobiles.**—In the average size (80 qt.) automobile engine radiator, if 1½ pints of ethylene glycol is used, together with 10 oz. of sodium chromate, the radiator and engine block will be protected to -80°F, and the cooling system will at the same time be protected against destruction by corrosion.

**Anti-Freezing, Non-Corrosive Solution.**—A solution for water-jackets on gas engines that will not freeze at any temperature above 80° below zero (F) may be made by combining 100 parts of water, by weight, with 75 parts of carbamide paste and 50 parts of glycerine. This solution is non-corrosive and will remain perfectly liquid at all temperatures above its congelating point.

**Anti-Frost Solution.**—As an excellent expedient to the freezing of glass windows, apply a mixture consisting of 55 parts of glycerine dissolved in 1,000 parts of 68 per cent alcohol, containing to improve the color, one ounce of aniline. As per the mixture clariety, it is a 3 pounds of the paste; make a hot water bath with sufficient water, and enter the goods for ¼ hour; afterwards carefully rinse and dry.

**FIRE EXTINGUISHER (For Automobiles).**

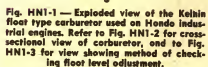
Mix well together:  
98 Parts of Carbamate of Soda  
2 Parts of Oxide of Iron  
When this mixture is thrown on a fire carbonic gas is liberated. This gas being heavier than air, smothers the fire.

**RED FOR WOOL.** For 40 pounds of goods, make a tolerably thick paste of lime and sulphuric acid, and allow it to stand for a day. Then take tar, 4 pounds, lin liquor, 2 pounds 8 ounces, & as per the mixture clariety, it is a 3 pounds of the paste; make a hot water bath with sufficient water, and enter the goods for ¼ hour; afterwards carefully rinse and dry.

pretty complete diagrams on repair of all types of small gasoline engines. if your chainsaw is lugging down, your pump sputtering, your washingmachine clunking, your lawnmower rusting away, this book will help.



**\$4.95** postpaid

or **WHOLE EARTH CATALOG**

Nicholson has been making files for 106 years, so it is only right that they publish a book about files called *File Philosophy*. If you ever use files, the book is worth getting, the more so because it is free.

[Reviewed by Fred Richardson]

*The following is from a Navy report*

**Velodur-metal** is a molecular bonding metal that can be used to bond materials together without heat or energy. Its components are macro molecules of zinc, copper, iron, steel, glass and aluminum particles that form a metallic bond. It can be used to bond steel, aluminum, copper, brass, zinc, concrete, tile, glass, wood, rubber, cast iron, and synthetics. Two or more unlike metallic materials may be bonded together with Velodur-metal. Velodur-metal is non-toxic, non-flammable, has unlimited shelf life, will resist heat up to 570 degrees F, and will not conduct electricity. The standard application is to mix the two components in a 1:1 ratio. The standard curing time is 3-4 hours; after this time Velodur-metal may be used in a wide variety of applications. Velodur-metal also comes in a rapid form, mixed on a 1:1 ratio also, and is used in tanks, piping systems and other pressure vessels while still under construction. Velodur-metal cures in 4-5 minutes. However, the Velodur rapid will cure in 1-2 minutes. The Velodur rapid is used on the Velodur rapid to stop the flow of pressure the Velodur standard metal should be applied over the rapid for the best and lasting

USS NANTAHALA (AO 60) — Butterworth heater, upper level, forward engine room, expansion joint was badly deteriorated along bottom and continually leaking due to several holes. Welding or brazing were impossible. Velodur-metal was applied using fiberglass cloth as a void cover with excellent results. The operating pressure and temperature of this heater is 125 psi and 400 degrees F.

Velodur Metal Technical First Aid Kit Contains:

- 2½ lbs. Velodur Metal Standard
- ½ lb. Velodur Rapid
- 1 bottle Special Cleaner
- 1 yard reinforcement tape
- 1 spatula
- ½ qt. Velodur Fluidizer

F.O.B. Scituate, Mass.

Complete kit... \$75.00  
from:  
American Velodur Metal, Inc.  
P. O. Box 156  
Scituate, Mass. 02066

This book gives a few principles on motor operation fundamentals, then describes in more detail several types of ac and dc motors and the control and starting devices needed to run them. Some curves of operating characteristics and a brief trouble-shooting guide are given for each type of motor. There is enough information to get a feel for the differences between the many types of ac and dc motors which exist, but it would probably be difficult for a layman to use this book to select the proper motor for a given application without outside help. It is probably also necessary to have a basic understanding of simple electricity theory from the *Electricity* series by Rider Publications before reading *Electric Motors*. Nevertheless, it is a fairly complete survey of available motor types, all under one cover.

[Reviewed by Marv Vickers]

Electric Motors  
Edwin P. Anderson  
1968; 414 pp.

**\$5.95** postpaid from Audel's or Whole Earth Catalog  
(cheaper from Silvo or U.S. General)

From:  
 Theodore Audel & Co.  
 Division of Howard W. Sams & Co., Inc.  
 4300 West 62nd Street  
 Indianapolis, Indiana 46206

or WHOLE EARTH CATALOG

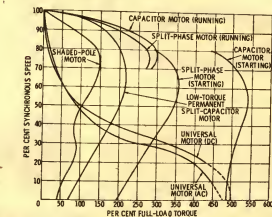


Fig. 20. Speed-torque characteristics of common types of fractional-horsepower motors.



**Filing Block.** A piece of hard, close-grained wood having grooves of varying sizes upon one or more of its sides. Used for holding small rods, pins, etc., in the jaws of the vise while being filed. Also a block of zinc, copper or other fairly soft metal as one of a pair of "protectors" placed between the vise jaws to prevent work becoming damaged while being held for filing.

**Popular Mechanics** offers a list of reprints of innumerable homey projects, priced 15¢ to a dollar per project. —SP

[Suggested by Tom Duckworth]

**\$ .25** postpaid

from:  
Popular Mechanics  
Dept. WW  
224 West 57th St.  
New York, N.Y. 10019

X12	Alternator, getting to know it	3/63-174, \$1.05
X14	Amplifier for your po'kei 10/66-196, 45c	
X15	Amplifier, guitar	11/57-160, 75c
X16	Antenna boosts FM reception	11/63-166, 15c
X17	Antenna, UHF yagi	6/59-144, 45c
X18	Antiques, turning reproductions into	7/66-116, 75c
X16	Aqua-sled	7/66-136, 30c
X20	Arbor press for small shop	7/53-166, 45c
X21	Arbors & trellises	4/51-166, 60c
X22	Arc welder	6/40/44-205.213, \$1.35

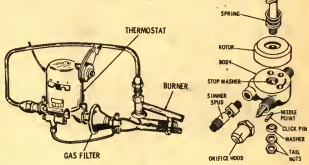
*This is the most useful book on home appliance repairing that I have seen. It is intended for the serviceman, but it is written clearly enough to help anyone who knows how to use a screwdriver. Covers small and large appliances like ranges (gas and electric), refrigerators, & air conditioners. Reading the appropriate section before calling a repairman would be good insurance against padded repair bills.*

[Suggested and reviewed by Fred Richardson]

Edwin P. Anderson  
1965; 600 pp.

**\$6.95** postpaid from Audel or Whole Earth Catalog  
(cheaper from Silvo or U.S. General)

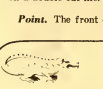
from:  
Theodore Audel & Co.  
Division of Howard W. Sems & Co., Inc.  
4300 West 62nd Street  
Indianapolis, Indiana 46206

or **WHOLE EARTH CATALOG**

With top lighters, pilot flames generally should be adjusted so that the top of the flame does not come in contact with any part of the lighter. An impingement of the flame on cold metal will usually produce either an undesirable odor from the incomplete combustion of the gas or an undesirable carbon deposit. Pilot outage and odor are sometimes experienced with lighters that have a solid top lighter hood; these conditions are caused by an accumulation of carbon and dirt in the dome and around the air ports of the hood and can usually be corrected by drilling a 1/8-inch-diameter hole in the top of the hood.

**Float.** Sometimes used to refer to the coarser grades of single-cut files when cut for very soft metals (like lead) or for wood.

**Overcut.** The first series of teeth present



DIVINE RIGHT'S BOXES

[illegible]

(continued)

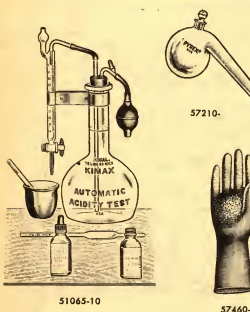


## Matheson Scientific

A nationwide distributor of professional lab equipment, from Abbe refractometers to Zimmerli vacuum gauges. Their 111-page catalog costs them \$15 each, so consult with a salesman at their office nearest you. If it appears you'll be a regular customer you get the catalog free. Minimum order \$20.

—SB

(Suggested by Walt McIntosh)



51065-10

57460-

## Laboratory Supplies Co.

This company is geared for smaller orders and more amateur equipment than Matheson.

—SB

Catalog

(Suggested by M. A. Klotz)

free?

from:  
Laboratory Supplies Co., Inc.  
29 Jeffry Lane  
Hicksville, N. Y. 11801

**AA473 Epoxy glue**—World's strongest adhesive. It handles the toughest bonding jobs. Comes in handy two-tube package. The great strength of the glue is achieved by a chemical reaction between the resin and hardener when they are mixed in equal quantities. Because we used only metals, wood, leather, masonry, pottery, rubber and most plastics to themselves or each other. It is transparent, flexible and waterproof. Sets in 4-6 hours. 2 oz. tube kit (1 resin, 1 hardener) Kit # 88



On Jerry Stoll's advice, I painted 1/2 inch plywood with this Carboline paint (clear) and made a darkroom sink impervious to all evil. Next time, a bathtub.

**PAINT**—Carboline Protective Coating, Vinyl, Series K. A strongly adhering self priming top coat for wood, metal or concrete. It is easy to apply and the dry film retains good flexibility and provides excellent abrasion resistance. This film affords exceptional protection in moist atmosphere and are recommended for dark room and laboratory maintenance. Series K paint is primarily a maintenance protective coating for general use in mildly corrosive atmospheres. It is easily applied with brush or by spraying. dries rapidly, keeps idle time of facilities to a minimum and requires no separate primer for surfaces in good condition. Dues to a glossy finish when used over Carboline primers and provides maximum protection when used.

May be applied directly to wood, metal or concrete. Galvanized and non-ferrous metals require primer with 55082-10 wash primer and 55081-10 intermediate primer to assure best adhesion and longest top coat life. May also be used as a refresher coat over other vinyl coatings. In many cases it may be applied directly over well conditioned coatings of other paints but a test application should always be made first to check for compatibility.

Coverage: 350 square feet per gallon in a 1 mil coat. Recommended film thickness 3 mils. Thickness per coat 1 1/2 mils (dry). Drying time to touch, 10 to 15 minutes; to over coat, 2 to 4 hours. For thinner see 55080-75.

Cat. No.	Color	Pkg. size	Each
55080-15	K-23 Black	1 qt.	\$2.25
55080-20	K-23 Black	1 gal.	6.10
55080-45	K-45 White	1 qt.	6.60
55080-45	K-45 Clear	1 qt.	2.05
55080-75	TP-92 Thinner	1 qt.	1.40

57460-

57840-

**AA322 Handy Memo Timer.** Here is a pocket-sized, Swiss made 2 hour time alarm. Easy to use. Set the dial from 5 minutes to 2 hours. A gentle buzz sounds when the time period is up. Only 1 1/2" in diameter and weighs about 1 ounce. Easy to read with clear gold figures and a red indicator against a handsome black background. Has convenient key holder on strap.

Each \$5.95; Dozen \$60.00



**AA328 Instant Cold.** A product designed primarily for first aid purposes but can be used when. It is desired to cool a specimen where ice or refrigeration is not readily available. The chemicals necessary to get the cold are packaged in a one pouch. By squeezing the pouch the chemicals are mixed and in about two seconds 20° cold is created in the pouch. Stays cold for about 30 minutes. The plastic bag will conform to the shape of many items. Does not deteriorate on the shelf. These bags are excellent for use in first aid to relieve swelling, reduce internal bleeding, reduce pain, etc. These are for one time use only.

Per carton of 25 \$ 1.88  
Per case of 8 cartons of 25 \$ 12.00

**AA40 Instant Heat.** A product similar to above but with the reverse property of being able to provide heat when you are not near a source of heat. Will provide heat for about one to two hours.

Per carton of 25 \$ 1.88  
Per case of 8 cartons of 25 \$ 12.00



**AA415 Plastic graph sheets.** New gridded sheets are laminated so that the plotting is permanent. One side has a matte finish for pencil plotting. The lamination and matte finish provides permit unlimited reuse of the same gridded sheet. Each sheet is approximately 8 1/2" x 11", punched for standard ring binder. Grids are printed in red for good contrast between the grid and the plotted data.

Model	Type of ruling
A	4 x 4 to the inch
B	8 x 8 to the inch
C	10 x 10 to the inch
D	10 x 20 to the inch
E	10 x 10 to the centimeter
F	Log 2 x 1 cycle
G	Log 1 x 1 cycle
H	Log 2 x 1 cycle x 60 divisions
I	Semi-Log 2 cycles x 100 divisions
J	Polar coordinate chart

Each \$7.50 Assorted Dozen \$60.00



17-8140

## Beware of HyLab\*

I am a cameraman working for a film company on location in Colorado, and am a California resident. I am writing in regard to a very unfortunate incident which has recently happened to me.

In my March 1967 Supplement you listed the HyLab Company, Box 8525 Chicago, Ill., and described them as selling chemicals to small laboratories. Because my son has a chemistry set and I often have need for chemicals in my profession, I wrote them at the end of May requesting a catalog and/or price list. I received a letter from them in the middle of July in which they explained they were sorry but they were out of business and could not help me. I was a friend to mine that is a deputy sheriff in this town informed me that the town marshal had received a letter from "a chemical company" informing him that I was ordering chemicals to make LSD and that I should be placed under observation.

This allegation is absolutely untrue and I consider it a flagrant violation of my civil rights and an invasion of privacy. In the light of recent activities of the FBI in libraries, the action of the special police unit in Santa Barbara, the Kent State incident, just to name a few, I am very concerned. I don't know if this company is an FBI or police front but I don't like it. I am very upset that you would list a company like this in your catalog without a more complete investigation of it. I wonder how many of your readers (without better contact with their local police than I have) have innocently written this company and are now on police lists or are under surveillance as potential subversives. I would hope that you could print some kind of warning to your readers to avoid this company.

We appreciate and enjoy your catalogs but now we must wonder if we write for anything that might be considered illicit such as books on drugs or pot, political books, chemicals, etc., that we may end up on the same or other police list for observation.

If you should decide to investigate I hope we hear from you.

I am also writing Senator Alan Cranston, HyLab company, and my lawyer.

Larry G. Logan  
Tulifer, Colorado

## Ace Scientific Supply

Another beehemoth lab supply house, from alkalimitters to wide gauge. A big expensive catalog you must be a customer to get.

—SB

Ace Scientific Supply Co., Inc.  
1420 East Linden  
Linden, New Jersey 07036



12-2993

## 12-2993 MICRO SURGERY SET

For delicate work in micro surgery, experimental research and veterinary surgery. Complete in plush-lined fitted leatherette case.

## NOTE

The equipment described above is being investigated. Would anyone who ever received a catalog from HyLab Chemical Company please send a copy to:

Craig Yetter  
10th Floor  
919 North Michigan Ave.  
Chicago, Ill. 60611

## 17-8140 MINERALIZER—Water, La Motte Filtration

Designed to supply small amounts of chemically pure water where accurate equipment is impractical. It can be attached to a faucet with its own flexible connection. Fifteen pints per hour can be demineralized, with a capacity of 120 grains.

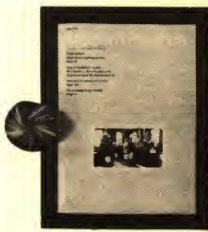
## Modern Plastics

Issued monthly and technically oriented, it covers the latest plastic products, manufacturing, and engineering. It's full of ads, and there is a free product literature card at the back of the magazine: you circle the appropriate number and the manufacturer mails you information.

Included in your subscription is the annual *Modern Plastics Encyclopedia*, the most comprehensive text available on plastics. It is mailed out each October & consists of a summary of the year's trends in plastics, information on polymer science, a textbook of fundamental plastics, a directory of 3600 companies, & reference data on plastic properties & characteristics. The *Encyclopedia* also has free product literature cards.

Lloyd Kahn

[Suggested by Michael Rosenthal]



Modern Plastics  
(Magazine & Encyclopedia)

\$10.00/yr. (monthly)

from:  
Modern Plastics  
Fulfillment Manager  
P.O. Box 430  
Hightstown, N.J. 08520



## Tamco Plastic Supplies

This company makes or supplies lots of plastic laboratory & commercial stuff: graduates, trays, pipe, Plexiglas, sheet, sewer & water pipe etc. The catalog is free, honest. I have bought a little from them and shipment has been prompt and the goods as advertised.

[Suggested and reviewed by Brooke Elgie]

## Catalog

free

from:  
United States Plastic Corp.  
1650 Elida Road  
Lima, Ohio

## POLYETHYLENE FLEXIBLE PLASTIC PIPE

MODERN-LINE		AVAILABLE IN BLACK ONLY		CLASS 75		STANDARD COILS		Line Price	
Nominal Pipe Size	Nominal I.D.	Weight Per 100 Ft.	Length	Outer Diameter	Inner Diameter	Weight Per 100 Ft.	Length	Outer Diameter	Inner Diameter
1/2"	.822	100	5	100-100	3-4"	\$ 3.68			
3/4"	.824	80	7.5	100-100	3-4"	\$ 5.95			
1"	1.049	80	12	300-100	3-4"	\$ 5.51			
1 1/4"	1.390	80	23	300-100	4-8"	\$ 15.79			
1 1/2"	1.610	80	31	250-100	5-8"	\$ 20.86			
2"	2.067	80	51	200-100+	6-8"	\$ 37.74			

## Kerodex Barrier Cream

I have been using Kerodex Barrier Creams by Ayerst Laboratories, Inc., New York, N.Y., for years with excellent results. These creams are applied to the hands before you start working with irritating chemicals. I find them especially useful when working with paints and concrete. With paints the solvents don't hurt my hands and paint don't stick to them as much as it did without. With concrete I can work the concrete with my bare hands (being less than expert with trowels) without having the skin dry out and shrink.

They are also supposed to be very good for protection when working with resins or liquid plastics. I've never used them for these substances. I have used them when working fiberglass insulation with good results. Also have pulled poison out with only the cream at protection.

Comes in two types: No. 51 for dry work; if you get it wet you must reapply at once. No. 71 for wet work like concrete.

Available in most drugstores here. There is a complete list of things it protects against included in the box.

Glen A. Twombly  
Pomona, N.Y.

## Cadco Plastics

Sheet, rod, pipe, tape, rod, film, adhesives. Vinyl, polyethylene, nylon, mylar, polypropylene, ABS, PVC. Comprehensive stock, offices nearly everywhere. —SB

Inquire to headquarters:

Cadco Plastic and Chemical Co.  
15841 Second Avenue  
P.O. Box 810  
Detroit, Michigan 48222

## Bag Balm

Check into Bag Balm, an antiseptic medication for cows, ulcers, teeth, whatever, which happens to be the most fantastic hand lotion ever made by anybody anywhere. Use by dishwashers, clam diggers, and lobstermen up here to change cracked calloused skin into beautiful soft flesh overnight! No shit. Contact:

Dairy Association Co., Inc.  
Lyndonville, Vermont

Charles Miller  
Monkton Island  
Maine



PVC film provides airtight lining for the inflated Fuji pavilion.

## Pocket-sized tent

Folding your tent and stowing away in the night is a simple maneuver with a new one-man shelter that uses no poles, stakes or ropes. Called Inflat-A-Tent, the air-film tent is sealed-off sections that form supporting ribs when inflated by mouth. It weighs 26 oz., forms a shelter 7 ft.-long and 40 in. wide with a full floor. Deflated, it is easily rolled up and stowed. Produced by Ute Mountain Corp., Englewood, Colo., to retail at \$3.95, the tent is heat-sealed with film made of Union Carbide's high-impact copolymer resin, DODA-1824.

## New honeycomb construction panels

A new RP sandwich panel for curtain walls and other interior and exterior applications is produced with a choice of paper or aluminum honeycomb. Called Glimondunde Unicomb by its producer, Dimensional Plastics Corp., Hialeah, Fla., the lightweight panels are 5/8 in. thick, with both surfaces simulating cleft slate.

Standard sheet size for the panels is 4 by 10 ft. They are available in a variety of colors and veining.

Prefabricated plumbing wall. A conceptual "wet plumbing wall" of modular design (John A. Stahl, B. F. Goodrich Chemical Co.), incorporates rigid PVC piping, rigid urethane foam, glass/polyester faces, rigid and flexible PVC extrusions, and vinyl-jacketed electrical wiring. Fundamental is the concept that all plumbing connections are made into the pipe-bearing wall.

## Acrylics: new look for church windows



Panels of colored acrylic make up translucent chancel window in Denver church. Circles are 10 ft. in diameter, window is 50 ft. high. Acrylic skylight admits daylight to altar area.



And Estelle crying and she had never met Eddie before. She cried and swarmed with herself crying out of my future box because she was dead too and mounted on my wall. Seeing Estelle lonely wandering around at Altamont crawls out of my past box and mixes with me and Eddie hiking down the canyon the first time I took acid in 1968. Eddie's dead. I called my sister in Cincinnati this morning. She's going to send me fifteen dollars by Western Union. I have to wait until it comes. My sister said that Uncle Emmet was sick and might not live. Him about to die alone at the old homestead in Kentucky. My sister said they had plenty of room and for me to come on. I didn't tell her about Estelle. But I don't know if that goes in my future box or the past. It doesn't go in my present box because my present box has been taken over by swarms of past and future. I mean I called yesterday. That's past. But the money won't come till this afternoon. That's future. But I am here waiting now. That's present. Watching me swarm out of my past box yesterday when I applied for a job at the Save-More Store. City Girl said Eddie had been shot dead in an alley near the bus station. I could think to do about it to what and go apply for a job at the Save-More Store. I went in the Save-More Store and applied for a job while Estelle waited outside in the bus. I only got half way through the application form. I wrote down my name and my game and this guy comes up and jerks the pencil out of the hand and says never mind. Next time come on and help unload these shoes. They hired me on the spot to set up a display of shoes. thousands of shoes. millions of brand new shoes they're desperate for help to get set up on display. I pay me a dollar fifty-five an hour plus ten per cent off anything in the store. Four hours at the Save-More Store. I cleared five dollars after taxes and social insurance and spent four of it on Kentucky Fried Chicken for me and Estelle to eat thinking about the Great Gatsby. Four hours at the Save-More Store. I cleared five dollars after taxes and social insurance and spent four of it on Kentucky Fried Chicken for me and Estelle to eat. I ate meat and potatoes and grew because we're weak and hungry and tired and bad and maybe don't have any place to stay tonight because still in the future box at the time was there or not? I caught at Eddie's place with these other people.

(continued)

Plastic Industry

135



## Welding Craft Practice

If you have access to either a gas or an electric unit then all you need is the correlated volume of Welding Craft Practice and a lot of patience (whilst your hands learn what your old brain says they should be doing) to begin transmitting the bare metals. These books give a complete description of the equipment used in oxy- and arc welding plus a detailed accounting of the methodology from lighting the blowpipe to testing the strength of the finished weld. The potentially dangerous situations in storing transporting and welding with gas under pressure, and the precautions necessary for using electric arc are outlined in clear competent british prose. If you're going to learn welding on your own read the safety sections of the book first and return to them so that your safety consciousness is well described before picking up the striker.

(Reviewed by Doug Gunesch)



**Welding Craft Practice Part 1, Volume 2**  
Electric Arc Welding and Related Studies  
N. Parkin and C.R. Flood  
1969; 182pp.

\$2.40 postpaid

from:  
Pergamon Press Inc.  
Maxwell House  
Fairview Park  
Elmsford, New York 10523  
or WHOLE EARTH CATALOG

**Welding Craft Practice Part 1, Volume 1**  
Oxy-acetylene Gas Welding and Related Studies  
N. Parkin and C.R. Flood  
1969; 159pp.

\$2.40 postpaid

from:  
Pergamon Press Inc.  
Maxwell House  
Fairview Park  
Elmsford, New York 10523  
or WHOLE EARTH CATALOG

## Soldix Welding Torch

A medium lightweight welding torch that uses pellets for oxygen. Very portable, nice to have as your bus torch. (If you already got a propane torch, Soldix has a "Thrifty Kit" for \$24.95 postpaid). 5000° hot.

—SB

## Soldix Welding Torch

\$34.95 postpaid

from:  
Cleanwell Products  
Box 1061  
South Gate, California 90280



## LIGHTING UP BLOWPIPE

Turn on both gas supplies and set correct pressures as before. Slowly open acetylene control on blowpipe until it is purged of air and acetylene is issuing freely (note and remember the pungent smell of the gas), and light at the tip of the nozzle using a spark lighter. The resultant diffused, luminous, but sooty flame is pure acetylene burning in air. Turn up the fuel gas supply until the smoke vanishes from the tail of the flame and the nozzle is now working at its normal capacity with a suitable gas velocity. The flame now, although cleaner, is still of a relatively low temperature. Open the blowpipe oxygen-control valve slowly and note the change in the character of the flame as the oxygen is introduced. The body of the flame turns blue with the formation of a white cone which decreases in size with the development of a small greenish-white cone at the end of the nozzle. Continue increasing the supply of oxygen until the white "feather" of excess acetylene just disappears, leaving a clearly defined inner cone. This is a correctly adjusted neutral flame consuming equal quantities of acetylene and oxygen from the welding gas supplies and a further amount of oxygen from the atmosphere.

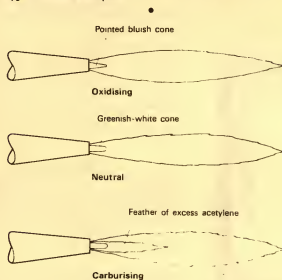


FIG. I.18. Types of flame.

## Wright Winch

In March 1970 *SI Cat.* (p. 16) Jimmie Silverthorne Suggested a cable winch for getting unstuck. *ABSOLUTELY!* and I recommend the "Wright Type 'R' Pulley, Model 2 B" at about \$35. Over seven years, mine has loaded nearly all the timbers to frame a two-story house with oak, hauled both my VW Van and 1-ton pickup from ditches, bogs, brooks, muddy fields, snow-banks and the ocean, (all would have been call-it-one-truck jobs without it), removed and installed numerous VW and Detroit engines, loaded and unloaded heavy shop machinery, and done many dozens of other useful things for me. Its beginning to show a little wear now, but not too much.

Its cast Aluminum and so light enough to pack into the woods, as well as rust-proof. Works covered up snow without binding up, and all moving parts can be worked up/ mitters on so you don't get frozen to it when, say, ...you want to release it. One minor shortcoming: The release-pawl spring wears out about once every two years. Order two or three copies of *Expt. No. R555, Section 2* at about 35¢ ea. at the same time you order the winch.

Its made by WRIGHT HOIST DIVISION, American Chain & Cable Co. Offices in York, Pa. Also Atlanta, Chicago, Denver, Detroit, Los Angeles, N.Y., Phila, Pittsburgh, S. Francisco, & Bridgeport, Conn.

Far superior to all other makes I've used, which is about five.

Mike Sweeney  
Italy Cross, Nova Scotia

## Smith Welding Equipment

Professional welding equipment.

[Suggested by Jerome Skubal]

Smith Welding Equipment  
27th Avenue & 4th Street S. E.  
Minneapolis, Minnesota 55414

## STRIKING THE ARC

Select a 10-gauge electrode for your first practice at striking the arc. Set the current regulator to 117 amperes. For material use 3x3/8" mild steel flat bar approximately 7 in. long (flat bar is more suitable than plate because it is much easier to cut, either with shears or power saw). Next, direct the tip of the electrode towards the practice plate. Set a number of times with the current switched off. When the electrode touches the material, quickly draw away to about 1/8" from the surface. Do not worry about the correct angle of electrode at this stage. When this exercise has been practiced a number of times and one has the "feel" of the electrode, switch the current on and practice striking the arc. Remember to keep the welding screen in front of your eyes and arms when the electrode touches the plate, very slightly scratch the surface. When the arc burns quickly draw away to approximately 1/8". The arc will still continue to burn if the electrode is 1 in. or more away from the surface of the plate but the arc must be kept short in order to control the deposition of the weld metal.

Should the electrode "stick" to the plate, do not snatch and twist to try and free it as this will only result in the piece of flat bar being lifted from the bench still attached to the end of the electrode. The correct procedure is as follows: Switch the current in front of the plate, switch off the welding set at the switch fuse, which should be located on the wall of the welding bay. Then give the electrode holder a sharp twist, which will free the electrode from the plate. The electrode and the plate may be hot, so exercise caution if attempting to touch either of them. Before continuing after the electrode has been freed, inspect it to ensure that the coating at the tip is not damaged, as in most cases the coating will be broken. The arc is very difficult to strike with a bare wire and a fresh electrode should be taken if damage has occurred.

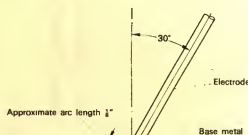


FIG. I.19. Electrode angle arc length.

## Yankee Winch

Well,

I'm finally writing a letter to an institution (that is to say something that is not a friend or one of the relatives at Christmas).

I'd like to tell you about a thing I just got. It's called a Yankee Winch. It is manufactured by Yankee Mechanix Inc. in Newport, N.H. They cost for the large one \$150. It is a hand operated winch that is rated a 1-1/2 tons. The tests on it done by some laboratory in N.Y. showed the winch could lift 1500 lbs without damage to the unit. A lot of other really impressive stuff.

Winch comes with 60 ft of cable.

I don't know how the company is as to catalogs or service because the owner of the company is a friend of the family. His name is Bill Rager, is the owner also of Storm Rager & Co. Inc. a firearms manufacturer. Anyone who knows about these guys know that they are built with quality.

I'm a C.O. so not too big on them still the man believes in quality in his products so I'm sure that the company is as top notch as the winch.

Hope I've helped you fuckin' long hairs.

Zip McCann  
Pawnee, Vermont

## The Art of Blacksmithing

A warm book that makes me want to learn blacksmithing. Bealer presents the history and methods of smithing in a fashion very useful to a person learning the trade. An excellent coverage of tools, most to be made by the smith himself. Bealer collected this material from many old smiths and then tried it himself in his own forge.

(Reviewed by Fred Richardson)

## The Art of Blacksmithing

Alex W. Bealer  
1969; 425 pp.

\$10.00 postpaid

from:  
Funk & Wagnalls  
53 West 77th St.  
New York, N.Y.



Welding: [1] where to place blow for a lay weld, [2] how to hold iron on anvil before the first blow.

Generally, I have tried to describe and illustrate only the fundamental techniques of the trade, and show how these techniques were used on a few familiar items. I hope that others may find my material interesting enough to acquire the tools of the smith and actually practice his techniques to the point that some of the ancient techniques and tools will be rediscovered for the benefit of modern man. If the ancient arts can be reconstituted through selective breeding of modern domestic cattle, it seems possible that the ancient smith may be waiting within a few modern men.

## Master Mechanics Mfg.

Jacks 'n pumps 'n motors 'n gadgetry.

Catalog

—SB

\$10

from:  
Master Mechanics Mfg. Co.  
P. O. Box A  
Burlington, Ws 53106

P. O. Box 65  
Sarasota, Florida 33578

## 5 TON PUNCH PRESS

289.00



Industrial five ton bench press, massive, reinforced with vertical, lateral and horizontal full length of the press. 65lb. precisely balanced flywheel requires less original power is operated by single pin repeat or non-repeat clutch of new Synchronized design. One screw, quickly removed from collar, changes clutch to repeat action. Ram guides have 8" length, ram stroke 1-1/4" (over strokes available) Die bed area: 10" right to left 6-1/2" front to back. Press operates at 280 strokes per minute, takes 1/2 HP electric motor, (not included).

C122, 5 Ton Press, Factory Price FOB Missouri

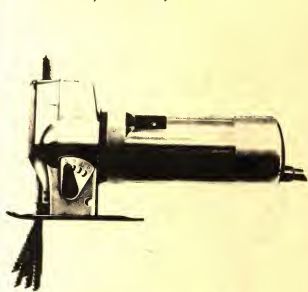
\$289.00

## Lesto Orbital Action Jig Saw

Expensive but worth it. Follows a scribed line as accurately as a jig saw, cutting "smooth as a baby's ass" with no jumping around. Uniquely, it also can cut as rough and fast as a sabre or bayonet saw, humming through the toughest wood (up to 2-3/8" thick), soft steel (up to 1/4"), and a remarkable assortment of other stuff. It does this without any change in speed or power, changing only the kind and nature of the cutting stroke. It's hard to explain how this works, but it does. The fastest cuts are done with the easily adjustable orbital movement set for full swing, similar to the sort of rocking motion you use with a large hand saw for rough cuts. The minimal swing is like the motion used in cutting thin stock or accurate cuts. Almost 40 different blades are available, saw types as well as knife and rasp types, fitting it for reinforced plastics, laminated fabrics, soft rubber, asbestos cement, wood-metal laminations, and the usual and unusual metals and woods. Should be perfect for dome frames. Lighter and more compact than ordinary saws, it, also can be used for hours without your arm feeling like it was dropped in a mixer and without your ears stuffed with cotton.

This Swiss goodie is hard to find since it is distributed as an "industrial power tool" through specialized distributors who service factories and wholesale hardware stores who sell to the construction industry... 20% off "Industrial Net (List) prices" is usual from the latter if you insist. While many of the so-called "industrial power tools" may be irrelevant to our use (e.g., demolition hammers), it is disturbing to find some of the best tools, designed for long trouble free use and low operator fatigue, being available only to those "in the trade." Perhaps other CATALOG readers know of similar small "industrial" tools that should be better known.

[Suggested by Don Boyce.  
Reviewed by Alan Kalker]



Lesto Orbital Action Jig Saw  
Model B554

\$99.50 industry net (list) price, postage

from:  
Robert Bosh Corporation, Distributor  
147 Beacon Street  
South San Francisco, California 94080

## AC ARC WELDER

20-125

AMPS

Complete  
with Kit  
as shown

94.50

SPECIAL SALE  
LIMITED QUANTITY  
WHILE IT LAST

Only

79.50



Heavy Duty Model. For light production and hundreds of repair and construction welding jobs. Gives 20 to 125 amp, output. Lightweight, long-lasting electric arc—easier always ready for instant action. Constructed for fast, dependable welding, cutting, soldering and cutting on iron, steel, brass, bronze and other metals from 24 gaug to 1/2 in. thick. Has 16 heat stages, uses 1/16 to 1/32 in. welding rod. Sturdy, welded steel cabinet. Welder guaranteed for 1 year. Operates from 110-220 V AC, 60 Hz. One year warranty. 2 1/2 lbs. in. weight. Complete with welding kit. List price \$149.50.

G25 W. 100 lbs., with kit, . . . . . \$79.50



Fred says—

Buy "Vise-Grip" brand. None of the other similar looking plier wrenches are as good. The other sizes of Vise-Grips are just as good as the Jr.

"Vise-Grip" is just like "Chanelcock". Brand name, not a generic term. Both better than others.

## Locitite Technology

Mechanics, especially those working on old, frayed-out machinery, will dig Locitite. Anything threaded will stay together and not vibrate loose if you use the stuff. This is God's gift to the motorcycle fixer. The same company also makes a glop that you can use to make gaskets with right on the spot, and for those engaged in putting new bearings in VW transmissions, they make a bearing seating compound that enables you to use wobblly old transmission caps instead of throwing them away. It works.

[Suggested and reviewed by Jay Baldwin]

## Locitite Technology Catalog

free

from:  
Locitite Corporation  
North Mountain Road  
Newington, Connecticut 06111

## Cheaper Than Locitite

On page 48 of Fall 69 four dollar catalog a review of Locitite products. Being a professional motorcycle mechanic for 25 years, I'd like to suggest a cheaper alternative to keeping nuts & bolts from falling off. Use weather stripping cement. Whereby Locitite is not used first, Locitite won't stick. Every trace of oil and dirt has to be removed. 3M can be used as a gasket, if flowed onto the gasket—surface and allowed to set up first (but not recommended—only in emergency) and as a cement to keep loose handlebar grips from falling off, etc. The one drawback to 3M was on nuts & bolts the yellow color. If looks not important, 3M may and cheap. Locitite products work good, but expensive, especially for home repair, and must be used carefully—with primer every time.

Dick Tetz  
San Francisco, CA.

## Go-Go NO-LOK

The counterpart to Locitite. Anyone who has ever put a machine back together in imminent fear that the gaped-up old threads are going to jam & that he's then going to twist the head off a bolt, or anyone who has ever had to apply lots of Liquid Wrench & swearing to get a bolt off will dig it. You put it on the threads of a bolt and that bolt just slips in and won't ever lock up. I was amazed the first time I used it; makes bolts feel like brand-new. I'm not sure if it makes things more prone to coming loose from vibration—in motorcycle applications it may be best to use lockwashers or safety wire.

Price varies; my father paid 95¢ for a little can. I paid \$2.00 for a really big one. Best obtained through auto parts supply houses. A little hard to find; in some places contacting jobbers or distributors may be necessary.

Bill Houghton  
Fairfax, CA

Another brand is Never-Seez.—Fred.

## Cutawl

Peace...

I wish to recommend a tool: the Cutawl, model K-11, from The Cutawl Corporation, Bristol, Connecticut 06031.

The company calls it "a high-speed, portable precision cutting machine for all types of sheet materials." It is a sort of a "super saber saw", but instead of rotating the whole tool with the Cutawl you rotate the blade only with a large thumb knob. It cuts over a dozen different blades some of which are saws, some chisels, some knives.

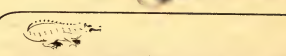
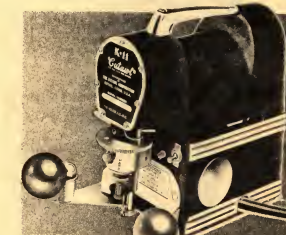
It is used mainly in the display, theater and sign trades for cutting such things as large letters, outlines of drawings, valances, etc. from materials like homotex, foamcore, plywood, andplexiglas. It will cut out other things like cardboard, leather, and cloth (1/2"-2" thickness of wool, paper, cork, thin metal (up to 30 gauge carbon steel). The manual lists over 100 materials.

A circle cutting attachment is available (about \$13) with which you can cut perfect circles from 1/4" to 48".

The Cutawl is expensive (\$225 plus \$3 postage) but with even minimal care it will last for years. There are some still in daily use after 30 years. Also, if you contact one of the service centers you might be able to pick up a reconditioned one. (I understand the Model 10 would go for about \$135.)

I plan to buy my house next summer and will use a Cutawl for forming molds and files for the caulging. It is a great tool and I love mine. Peace...

Keith Richards  
Philadelphia, Pa.



The place is in City Girl's name. I didn't understand how that could be with Eddie dead though I'm rested and feel better and it's clearer now than it was. We found the apartment and I called my sister and asked her to send me fifteen dollars and she said that Uncle Emmet was sick at the homeplace and might not live that she had plenty of room and for me to come on. And then out of my past books come us going down that long hallway in the funeral home crawling out of my past box over toward the future like some future corridor we'll all walk down some day. And then Eddie's place and these same people being hypnotized and City Girl is there in my past box, and she says Eddie was shot dead in an alley not far from the bus station. Stay away from bus stations. Death lurks in bus stations posing as the candy man. Ask the people who've been killed there, they'll tell you ask Eddie. Ah the mystery of it all the questions gone unanswered. Where is Eddie's spirit now? What's happening in his body. Living there in its high school graduation suit, heads all folded, a stupid rose in his lapel and dust upon his rose and half the hair on his head. Goddam Momma give him a cureword rather than half of nothing. Why did you go halfway. He's dead. You want him back as you should boy. Why didn't you take him. Why didn't you go through with it. Give him the full cosmetic treatment and be satisfied. Eddie would have dug that. He wouldn't have given a shit. Eddie dug you Momma And I did too and still do and I hope you will. And she says Eddie was like this weeping over the body of your derling baby boy shot down in an alley. I stayed at your house. Do you remember me stayed there with Eddie four days one time. And she says Eddie's old man couldn't dig it. He disappeared into the news and let us swirl around like a wind. But you Momma. You were all right. You were Eddie's Mom.

Eddie's Mom recognized me at the funeral parlor. But she wasn't glad to see me because of Eddie's hair. Goddam Momma if you wanted it short you should have had it cut full short. You should have given that boy a cureword like you wanted. You're the one who's living now. You should have pleased yourself before anybody else. How long has it been since you pleased yourself. Since anybody pleased you. You tried to half please yourself and half please Eddie and now nobody's pleased but it's not too late to do something about it.

I swear out of my future box with a foot-long pair of scissors right into that funeral parlor to open Eddie's hair. His last and past and present future box. And give him a good short haircut like his Momma wants. Let's do it Momma it's not too late. Right there it is. Right there it is. What's left of Eddie's in that box and we could do it if we tried. Eddie's mother says that we do. I say I do. I say working at that funeral parlor to open Eddie's hair. So Louis now I say yes. Momma. For a little while anyway I am am sorry about Eddie. And she cries some more and City Girl says: Eddie had been shot dead in an alley not far from the Greyhound bus station and all I could have done all I could think to do was go out and get a job and work four hours at the Save-More Store and buy fifteen pieces of Kentucky Fried Chicken with my earnings.



## Snap-On Tools

Outstanding very expensive mechanics tools. If you're professional they're worth it. Otherwise no. Check yellow pages, call, and they'll send delivery truck of samples.

—SB  
[Suggested by Morton Grosser]

Snap-On Tools Corporation  
Kenosha, Wisconsin 53140



## Hardware Products Springs

Hardware Products two-page catalog of springs contains more useful data than a dozen handbooks. It lists actual, stock springs of varying wire diameters, outside diameters, and lengths, with spring rate (the increase in pressure per inch of squares or extension) and the price per spring, postpaid! The charts make it easy to select the right size spring, compression or extension, for whatever job you have.

[Suggested and reviewed by  
Stephen P. Baldwin]

Hardware Products Company  
84 Fulton Street  
Boston, Massachusetts 02113

**138** Tools Industry

# CATALOGS

a bunch of catalogs for catalog's sake, people learn from catalogs. if there was only one way to do a thing, then there wouldn't be any reason to choose between this and that; catalogs are wishbooks, where you can match what you want with what you need; catalogs are dictionaries where you can learn the vocabulary, talk shop.

—jd

## Grainger's

Motors and fans primarily. Plus melange of other industrial and home tools. Branches all over U.S. Wholesale only; you better have letterhead and/or resale number.

—SB  
[Suggested by Don Buchla]

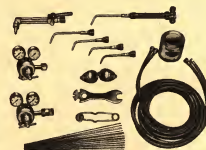
W. W. Grainger, Inc.  
5959 Howard St.  
Chicago, Ill. 60648

## 36" 2-SPEED CEILING FAN

Quiet, Draft-Free, 3638/2585 CFM Air Movement



EMERSON **\$57.00**  
Lot 1



**2-STAGE HEAVY DUTY WELDING & CUTTING**  
No. 2257



## TRUCKS

**\$30.55** **\$38.40**  
Lot 1 Lot 2



## Harry M. Smith

Harry sells precision tools and gages, mechanical inspection equipment. "If it can be measured, it can be made."

Brown & Sharpe, Eclipse, Helios, Lufkin, Mitutoyo, Scherr-Turnico. Lots more.

They sell Gerstner Tool chests.

Free manufacturers' catalogs. Send postage—they are heavy.

[Reviewed by Fred Richardson]

## Catalog \$1.00

from:  
Harry M. Smith & Associates  
1341 Old County Road  
Belmont, California 94002

## B&L DOUBLE LENS MAGNIFIER



A widely used magnifier originally designed for fine engraving and die work. Lens size 1 1/2" covers up to 2 1/2" field. Power 35X with good correction because of double lens construction. Plastic mount allows easy, hand held use.

Cat. No.	Each
81-34-75	\$4.95



No. 3034  
FULL COMBINATION SQUARE SET

## No. 193 Mauser Stainless Steel Vernier Caliper



## Campbell Tools

Machinist's stuff. Carries the low-cost Mitutoyo line of precision instruments.

## Catalog \$ .50

from:  
Campbell Tools Co.  
1424 Barclay Road  
Springfield, Ohio 45505



## DIAL TEST INDICATORS

RANGE	NO.	GRADUATION
.04"	513-102	.001"

Set includes:  
Stern (102036) & Point (102039)  
already installed. Plus  
Bars (102043) & (102045)  
Points (102040) & (102041)  
Stem (102081)  
Clamp (102051)  
Wrench (102037)

Complete with Holders and Points	PRICE
	\$19.50

**GOVERNMENT SURPLUS FOR NON-PROFIT GROUPS**  
There is, in theory, a very special deal for local government and private non-profit educational groups. You may qualify if your shell has been labeled a non-profit corporation or foundation even though your purpose is not solely educational, e.g., a church. GSA and DOD property is available through special direct and State administered programs. I will take several weeks to qualify for these programs, but don't stop there; also get your name on the regular lists open to all. In one part of the special program the Government donates the staff free to a State agency that administers its distribution. The State agency then sells it to the qualified non-profit group for what it costs them to handle it.

#### "Donation" Information Packet

free

from:  
U.S. Department of Health, Education and Welfare  
Office of Field Administration,  
Surplus Property Utilization Division  
Washington, D.C. 20201

**MACHINE TOOLS:** Various types and sizes, including cutting tool holders, dog lathes, V-block and taper shank sockets.

Item is Unpacked - Used - Poor Condition  
Total cost \$800  
Est. total wt. 50 lbs. 1 LOT

**BODY AND FRAME, JEEP, UTILITY:** 1/4 ton, 1952, Willys (M88A), S/N 22659. With the following major components attached: engine block, transmission, transfer case, radiator, rear end and 4 wheels and tires. USA 20965498.  
Outside - Used - Poor Condition  
Total cost \$1000  
Est. total wt. 1750 lbs. 1 EACH

*this is a page or so of alan kalker's research on the paperwork necessary to get ahead of those fifty dollar jeeps we've all weaned for so long. individuals can indeed buy things at the same price that straight shooting ralph pays to stock them in his acedecydey bargaincent army and good deal warehouse surplus outfit. read carefully, follow alan's steps, because it has to be done correctly to work.*

-jd

The following pamphlet is a bit sketchy, but it seems to be the only general guide around. It will at least give you current addresses for fuller information on special problems.

#### How to Buy Surplus Personal Property

\$25 postpaid

from:  
Superintendent of Documents  
General Services Administration  
Washington, D.C. 20402

**TRUCK, PICKUP:** 1/2 ton, 1960 Ford model F100, S/N F100J089863, 4x2, 6 cylinder gasoline engine. Parts missing including instrument panel and ignition coil. FSN 2320-752-9452.  
Outside - Used - Poor Condition  
Total cost \$1255  
Est. total wt. 3550 lbs. 1 EACH

**BUS:** 37 passenger, 1960, International Harvester model B165-21986, 5/8 S/N127352E, 4x2, 6 wheels with tires, dual rear, wheel size 20", 6" wheelbase. Standard transmission with electric shift, air hydraulic brakes, 6 cylinder gasoline engine model 86-24, S/N 716275. Nylon body model 05509, S/N 308450. Damaged including window, entrance door glass, cushion and vapor motor. Parts missing including coil and glove compartment door. #91-02098.  
Outside - Used - Poor Condition  
Total cost \$645  
Est. total wt. 9000 lbs. 1 EACH

**DEFENSE SURPLUS** Much of the surplus you see in your neighborhood Army and Navy store may have come from a nearby Department of Defense retail store where you can buy military equipment from Uncle exactly as the store owner did. While intended to be open to all, the retail stores are becoming more difficult to find and visit. Your neighborhood store owner probably will not help. Many Defense Surplus Sales Offices (a list of these come when you request a Department of Defense Surplus Bidder application [below]) have retail stores, but they may not know of retail stores in nearby Defense installations. There seems to be no central list. You can try asking for "surplus property disposal officer" at all local large Army, Air Force, etc. bases. If you get someone, ask the day and time the retail store is open as well as the building number. Competitive bid bulk lot sales are basically simple once you get into them, but none of the information the Government sends you will allow you to believe a non professional can figure it out. "Sale by Reference," a Department of Defense term for non retail sales, includes methods no more esoteric than an auction. The only way to find out easily about these non retail sales is to put your name on the DOD mailing list for sale announcements. For the DOD there is one central address for the continental United States. You must ask specifically if you also want announcements of sales in Alaska, Morocco, etc. In exchange for your name and address to the below central office, you will get a bidder's application form asking which kinds of things you are interested in purchasing and which geographic regions you will purchase from. Check every type of thing you conceivably may need, since adding another item will take at least six weeks. Check at least two nearby geographic regions, and all geographic regions if you are interested in vehicles, boats, regions, aircraft. When your "bidder's application" is returned you will receive a pamphlet entitled "Sale by Reference" containing page after page of information of considerable small print. **DO NOT CHUCK IT OUT,** save it for you shall need it. Also, save the sale catalogs for "sealed bid" sales for about 6 months. Get in the habit of looking at the mailing label on your sales announcements. Every two months or so the numeral 2 will appear, and the number of the first line, and you must send back a post card saying you are still interested in receiving the announcements. If you forget, it will again take at least six weeks to get back on the mailing list.

#### Bidders List Application

free

from:  
Department of Defense Surplus Sales  
P.O. Box 1870  
Battie Creek, Michigan 49016

# GOV'T SURPLS

[All reviews by Alan Kalker]

**GSA (CIVILIAN) SURPLUS** The General Services Administration has charge of getting rid of all government junk now owned by the Department of Defense. They sell an incredible variety of stuff. Not only old Post Office vans, but also Forest Ranger's old horses, and kins from closed Job Corps Centers. GSA tends to be more difficult than DOD. Except for vehicles, sale items are often scattered about in remote locations, a procedure that dissuades the professional surplus buyer. GSA does not seem to have any retail stores, but is experimenting with fixed price sales of Post Office motor scooters. GSA puts a price between \$37.50 and \$175.00 on the scooters depending on their condition. After an inspection period of about a week, the doors fly open at 9:00 am on a specified day and it's first come first served. Remnants are offered following days until sold. Since the 1/2 ton tank-in Post Office vans currently go for from \$120 to \$180 at GSA spot bid sales, it is difficult to know why anyone would want the scooters. Particularly when scooters in operable condition are often set at more than \$100.00. The walk-in vans have 110 cubic feet enclosed bodies and with some thought could almost be a camper. Spot bid sales are the favored method of GSA sale. While bids are submitted in writing like a sealed bid sale, they are opened by item in your presence and the winner is announced as in an auction. When, for example, 10 identical vans are sold, you will know the winning bid on the first before you must submit your written bid for the second. There is no single central office for GSA sales information. You must request each geographical regional office to put you on the list.

#### Surplus Personal Property Mailing List Application

free

from:  
General Services Administration  
Property Services Administration  
Sales Branch, Personal Property Division

at the following regional addresses:

JFK Federal Building

Boston, MA 02203

26 Federal Plaza

New York, New York 10007

7th and D Streets, SW

Washington, D.C. 20407

1776 Peachtree Street, NW

Atlanta, Georgia 30309

219 South Dearborn Street

Chicago, Illinois 60604

1500 East Banner Road

Kansas City, Missouri 64131

819 Taylor Street

Ft. Worth, Texas 76102

Denver Federal Center, Building 41

Denver, Colorado 80225

1150 San Mateo Avenue

South San Francisco, California 94080

Federal Office Building

1209 5th Avenue, Seattle

Seattle, Washington 98104



#### REINCARNATION

One by one, the people at the funeral sat up and rubbed their eyes. This hypnosis program was only half an hour long, but everybody had the feeling that two or three hours had gone by. The TV sets were off now. The cool, blank tubes were as much a surprise to wheelchairs had turned them off as they were to any of the other mourners at the funeral.

"Who turned the TV's off?" asked Winston.  
"I don't even remember them going off," said Norton.  
"No, you turned them off," said Norton's rival, Bert.  
"No, man," said Norton. "I don't know who turned them off."

"We have a mystery in our midst," said City Girl.  
For a little while the room was quiet, except for the sound Estelle made as she flipped the pages of a book on Etruscan art.

"Maybe it was Eddie's e.g.-ghost," D.R. stammered.

Everybody in the room except Estelle turned to look at Divine Rite. It was the first time he had spoken since the night before. His silence had become such a fixture in the room it was as if a piece of furniture had been moved out when he spoke.

"I can dig that," said Chuck.  
"I can dig reincarnation," said Winston. "But I don't believe in ghosts."

"It's all the same shit," said Reed.  
"No it isn't," said Gilded Lily. "Reincarnation is an established fact."

"I had a dream once about reincarnation," said The Native. "I dreamed I was a lizard in a previous life."  
Friendly Persuasion asked The Native what that had felt like.

"It was pretty weird," I mean, I liked it. I liked crawling around close to the ground. I liked the next time around. When I did, I hoped I'm a lizard the next time around."  
Bert shook his head. "It doesn't work that way," he said.  
"You're never the same thing twice."

"Bullshit," said Norton. "Sometimes you're the same thing three or four times in a row."

Bert started to argue with Norton. But he was as about to speak, his energy suddenly drained. It was as if Norton about reincarnation just didn't seem worth the trouble right then, so he kept quiet. For a while everybody kept quiet. Finally City Girl got up and went to the kitchen. For a moment it seemed as if her departure might produce some kind of conversation. But it didn't. Ten or fifteen minutes went by. The only sounds in the whole apartment were Estelle shuffling pages and City Girl clinking dishes in the kitchen.

#### Bid Abstract Service

\$5.00 each, postpaid

first two for new subscribers \$2.50 each

from:  
Bid Abstract Service Company  
Drawer 1790  
Fort Stockton, Texas 97935



## Silvo Hardware

Tools tools tools tools. Brand names. Mostly good stuff. Several quality levels on almost all items. If you know what you want, it is probably here. Prices good, sometimes not as good as U.S. General. I have been pleased by their service on returned items. Takes about two and a half weeks to West Coast. Minimum order \$10.00. Silvo is a place you can go to. U.S. General is not.

[Reviewed by Fred Richardson]

Silvo Catalog  
146 pp.

\$0.50

from:  
Silvo Hardware Company  
Dept. UEC  
107 Walnut St.  
Philadelphia, PA 19106

## HEAVY WORKSHOP VISE



Heavy-duty channel steel front jaw beam covers screw. Extra large jaw anvil and anvil horn. Cold-rolled steel screw. Handle balls forged from handle stock. Replaceable malleable iron nut. Acme thread. Replaceable heat-treated steel jaw flaps. Permanent pipe jaws, positive "Tri-Grab" design. Positive locking swivel base, slip-handle lock nut. Polished jaws and anvil, bright red finish.

Full Width Open  
312-44E4230... 4" 6" 27 lbs. \$29.90  
312-46E5360... 5" 6" 38 lbs. \$7.80



Yellow Vanner Cutter - Stainless Steel • Reaching accurate .001" • With leather case. • Thumb lock • Hardened ground stainless steel. • Serrated-edged finish. • Inside, metric, depth measurements.  
TL-424 0" - 4" by .001" - 0.17" cm. by 1/128". \$13.70  
mm. \$15.75

## U. S. General Supply Corp.

Again tools, tools, tools. Brand names, catalog number is the manufacturer's model number. More junk than Silvo, and I think they sell mailing list. At least I get lots of junk mail that I trace to them. Prices sometimes better than Silvo, service somewhat worse. Good to compare the two, as they have different prices and different things. \$20.00 minimum order. Net costs are coded into the item number. Divide the numbers following "E" by two. Audel books are 15-25% cheaper than publisher prices.

[Reviewed by Fred Richardson]

## Catalog

\$1.00 refundable

U.S. General Supply Corp.  
100 General Place  
Jericho, N.Y. 11753



"LIFE GUARD" RULES  
Yellow "Life - Guard" finish protects surface... markings last 20 times longer. In 16ths and inches. Branded joints, tips.  
200-4LGE390 6-foot... \$2.85  
As above, with 6" extension.  
200-XLGE570 6-foot \$4.40



SPECIAL WHITE TAPE  
3/4" wide tempered  
tinting steel tape in  
white, marked at 8ths  
in black Heavy case.  
804-890E480 50' \$4.00 (240)  
804-9100E700100' 6.00 (350)

140 Tools Industry

Fox Valley Compression Tester—Single unit tester readings to 300 pounds per square inch and fits AL 18 MM. and 14 MM. spork plug holes, either gasketed or tapered and 1/8 inch hole is resistant to gasoline, oil and manifold heat.  
C19A-PB 1-lb. \$13.95



Stanley Metal Box—7 1/2" Capacity at 90°—45" Capacity at 45°—Me. 60M Has 24" x 4" Body Saw—Can be set to cut any angle from 45° to 90°. Catches hold saw above work. Lifting Spring raises saw out of hole cut. Adjustable stops to control depth of cut. Adjustable vertically. Adjustment for levels of different thickness.  
60M-S19 P—24 lbs. with Saw... \$42.98



Lancaster Handman Chain Saw—power packed to get the job done in a hurry. Meet popular with the occasional woodcutter, excellent for the suburbanite or farmer for cutting fire wood fence posts and general all purpose use. Comes with 3 different Guide Bars—TS—Standard—AN—Armored nose—BM—Roller tips. Power produced displacement—Net weight 19 lbs.—Fuel Position controller—Cutting chain is 3/8" x 303  
48H-L1 BF-24 18"-16" size—  
RN Model—\$119.35 TS Model—\$118.70  
AN Model—\$123.50 RN Model—\$125.45  
TS Model—\$117.98



No. 86 HOBBY CHEST—Contains Nos. 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 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1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866,





## National Camera, Inc.

All manner of tools for fine work. Not limited to camera repair at all.

[Suggested by Jay Baldwin]

## Catalog

\$1/yr (quarterly)

from:  
National Camera, Inc.  
Englewood, Colorado 80110

## Brookstone Tools

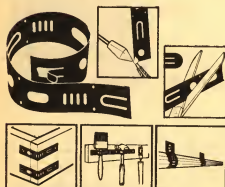
If precision tools are what you need, this company has nice ones.

—SB

Brookstone Catalog  
\$3.00.

\$25

from:  
Department C  
3 Brookstone Building  
Petersborough, N. H. 03458



## STRIP-STRAP DOES 1000 JOBS

Handiest steel strapping made. Can be bent, curved, twisted, shaped to meet any need. Clever locking tabs make it self-securing. Or you can nail it, bolt it, screw it or even solder it.  
Makes clips, clamps, hangers, brackets, reinforcements, in a flash. Cut it with scissors!  
Soft steel, 3/4" wide x 0.017" thick x 7 ft. long. Zinc plated against rust.  
T-1084 Coil of STRIP-STRAP ..... 60¢  
Three coils & up ..... Each \$50

## Jensen Tools

Primarily staff for electronics and precision assembly. List prices, postpaid. Good deals on kits (make up your own). Excellent service.

—SB

## "ENDLESS" HACKSAW REACHES TIGHT SPOTS



Simple to use, revolutionary, strong-built "Endless Saw" cuts flush in tight spots... inside pipes and tubing... also handles steel plate, corrugated iron, plastic and paneled wood. No long blades to bend or break. Enclosed spring automatically returns the blade after every forward stroke. Saw is supported in front casing by three hardened steel balls to reduce blade flexing. Uses conventional 10" or 12" blades by means of locking screw. One blade—18 teeth per inch—included.  
NC No. H-3200

\$9.00

## SAVE ON KITS

Suggests a variety of kits to many pouches containing the most useful lip joint pliers and nippers



Contains chain, round, flat, long nose chain, diagonal nipper and end nipper.

NC No. K-3583 Set of 6

\$11.45

## SOCKET WRENCHES

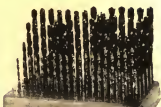
Five interchangeable box or socket hex wrenches — 1/8", 5/16", 3/8", 7/16", 1/2", 5/8", 3/4", 1" — Thread size: 400, 40, 6, 1. Choice of handles.

(Magnetic Handle) NC No. S-1645 \$5.50

(Non-magnetic Handle) NC No. S-1670 \$5.00



## MILLIMETER DRILL SET



Millimeter drill set from 1.0mm (.0394 in.) to 1.0mm (.0394 in.) in increments of .1 mm (.0039 in.). A total of 91 drills in a newly designed plastic holder for use. The holder is made of clear plastic. At their nominal millimeter size, the tool makes can now drill in steel at 1/4" in increments of approximately .004 in. This is a very economical way to fill in decimal dimensions such as the fractional, number and letter size drills all real cover. P set includes high speed steel drill bits. The index case is convenient way to store drills for immediate use. Complete with a millimeter to inch decimal conversion chart.  
NC No. S-1303

\$121.50



## HAND SABRE SAW GETS IN WHERE OTHERS CAN'T

Exceptionally handy miniature sabre saw solves many problems in model making, pattern making, jewelry work, other small-scale projects. Cuts straight or curved.  
Usefully shaped Swedish steel blade is .018" thick, has 26 properly set teeth per inch. Extends 1 1/4" from holder. Cuts wood, plastics and soft metals including aluminum, copper, brass, etc.  
Comfortable hardwood handle. About 7" long over all. Complete with two blades.  
T-1085 Sabre saw & 2 blades ..... \$1.05  
Three & up ..... Each 90¢  
T-1086 Spare blade ..... Each 20¢  
Per 6 blades ..... Each 20¢

## PATTERN TRACER IS TIME SAVER

Pattern tracer or "pounce wheel" is for transferring pattern drawing or other design of pattern onto work. Just draw tool along lines. Toolheld wheel makes series of tiny perforations thru pattern, resulting in easy-to-use series of tiny dots in workpiece. Eliminates layout errors. Dots don't smudge or rub off to cause mistakes.  
Used by dressmakers, tailors, artists, model makers, sign painters, designers, many others.  
Models: Wheel marks on wood, cardboard, foil, etc. resemble row of miniature rivets.  
1 1/2" diam. free-running steel wheel. 21 teeth per inch, for finest work. Swivels for easier action to follow intricate curves. Locks for straight work. About 5" long over all. Brushed aluminum handle 9/16" diam.  
S-1394 Pounce wheel & handle ..... \$1.75  
Three & up ..... Each \$1.55

## Bartlett

Tools for watchmakers, jewelers, instrument makers, engravers, and other slaves. (See also jewelers supplies on p. 156). Bartlett has several catalogs; tell them what you have in mind.

—SB

[Suggested by Jerome Senba]

Bartlett & Co., Inc.  
5 South Wabash Ave.  
Chicago, Illinois 60603

22-012

22-063

## IMPORTED MAGNIFIERS

Economically priced magnifiers with spaced doublet lenses that provide distortion free viewing. No. 22-012 has leather carrying case.

No.	Style	Working Distance	Power	Price
22-012	1 Lens	1"	10X	\$1.30
22-063	2 Lenses	1 1/4"	10X & 15X	2.40

## NOW, WIND YOUR OWN SPRINGS



Here's a simple tool of unusual versatility. Winds extensions, compression, torsion springs. Any diameter, length or pitch. Any gauge of spring wire up to about 1/4" dia. Use round, flat or square wire.  
Use it with a vise or lathe or drill press. Complete instructions included. (Spring wire is available at most large hardware.)  
About 4 1/2" long. Entirely of iron and steel.  
R-1084 Spring winder ..... \$5.50  
Three & up ..... Each \$4.95

## TEST SETS

For testing gold, silver, platinum, etc.

Contents:  
3 Bottles  
1 Test Stone  
1 Set Test Needles  
(In polished wood box)  
TS-800 Complete \$19.75



## CYANIDE

A very efficient cleaner for movements as well as jewelry. Kept in sealed, friction top cans.

One egg in one quart of water makes an effective cleaning solution.  
CL-520 — 1 Lb. Can ..... \$5.50

POTASSIUM CYANIDE (GRANULAR)  
Used for the same purpose as Sodium Cyanide but stronger and quicker acting.  
CL-522 — 1 Lb. Can ..... \$5.25

## SWIVEL BENCH VISE



Swivel base permits vise to be swung to any angle and locked in place. Jaws are polished and milled for close fitting. Twin guide rods assure parallel action. Body has a small anvil and has been examined to prevent rust. Clamping device will fit on bench up to 2" thick.

No.	Jaw Dimensions	Opening	Width	Each
48-484	2 1/4"	2 1/2"	3 1/2"	\$8.85

142 Precision Tools Industry

\$44.50

This kit is the result of careful research and consultation with tool engineers. It was originally developed to meet the needs of large electronic-assembly plants employing many technicians, engineers, and scientists. It contains all of the tools necessary to accomplish 99% of the jobs, yet it is priced below the individual cost of the tools it contains. There is no sacrifice of quality—only the tools of well-known, preferred manufacturers (mostly American) are included. The tools are furnished in a sturdy, hammerfold finish tool box with catch and padlock eye.



JTK-2

## How to Borrow Tools and Keep Friendship

If a man can trust you with his tools, there isn't a hell of a lot more he has to know about you. How trust is made: When you borrow the tool, have him check you out on it, even if you know it cold. That'll encourage him and insure you.

Agree on a time it will be returned by. Return it by then.

Return it either to his hand or to the exact place you picked it up from.

Use it carefully. If you break it, replace it immediately, preferably with a better one.

When you're finished, service it. Sharpen it, oil it, fuel it, fix it. If his tool comes back improved, he'll let you have anything he's got.

If you make him loan you something out of guilt, you'll be sorry.

—SB

## Tashiro Hardware

mailorder source for Japanese tools,

—jd

Information  
free

from:  
Tashiro Hardware Co.,  
100-113 Prefontaine Place  
Seattle, Washington 98104



## Gerstner Tool Chests

If you enjoy reading this catalog you are probably the kind of person that is seized by an irresistible urge to open all those beautifully fitted little drawers in antique cabinets. You can satisfy the urge in your own home thanks to H. Gerstner & Sons, Inc.

They make superb wood cases that will hold small interesting things of almost any size and shape: machinist's chests, medical instrument cases, boxes for artists, photographers, dental hygienists, and so on, ad infinitum. The thing that sets Gerstner apart from their competitors is their concern with quality. You can buy a box from them that will stand with perfect aplomb on your Chippendale and table. Their cases are made of polished quartersawn oak, American black walnut, or can be covered with black leather or vinyl. Prices range from \$27 to \$95, and one look will convince you that their products are a rare bargain in an injection-molded age. Their service is personal and quick; illustrated literature is available. You can get factory discounts at reduced prices, too.

[Suggested and Reviewed by Dr. Morton Grosser]

Write to:  
H. Gerstner & Sons, Inc.  
20 Cincinnati Street  
Dayton, Ohio 45407



POLISHED WALNUT	POLISHED OAK	ART LEATHER	OUTSIDE SIZE	SHIPPING WEIGHTS
No. W42	No. Q42	No. A2	20" x 15 1/2" x 9 1/2"	30 lbs.
No. W52	No. Q52	No. A2	26" x 15 1/2" x 9 1/2"	34 lbs.

## The Japan Woodworker

For exquisite woodwork and exquisite woodcarving tools, the Japanese have it. This is a new inventory store in Berkeley. They plan to put out a book on use and care of Japanese tools shortly.

—SB

## The Japan Woodworker Catalog

\$0.25

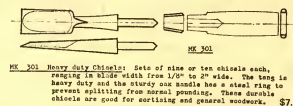
from:  
The Japan Woodworker  
1701 Grove St.  
Berkeley, CA 94709

## 日本指物師 刃

The Japan  
Woodworker  
fine quality woodworking tools from Japan

We have personally traveled to Japan to select Quality Tools. These tools come from Miki city in the Kansai area of central Japan. Miki city toolmakers have made tools for Japanese carpenters for over 500 years in this same area.

Japan has a long history of wood construction and the carpenters perfected their craft at a very early date in history. These carpenters raised their craft to what is considered by many today to be an art in design. The tools they used were of the highest quality and ingenious in design. The steel used in high-quality Japanese tools is of the finest grade found anywhere. This steel is to this day hand forged and tempered by a process that was known as early as the 13th century in Japan and not equaled in Europe until the 19th Century. The characteristics of this steel is a hard, sharp edge that remains extremely sharp even after repeated use. However, these tools must be used with care and for their intended purpose as the edges are more brittle than the softer, less sharp steel used in lower-quality tools.



Heavy duty and the sturdy one handle has a steel ring to prevent splitting from Japenese wood. These durable chisels are good for cutting and general woodwork. \$7.00

## Home and Workshop Guide to Sharpening

Make a distinction. Call it the first distinction. (See p. 12.) Minds do this [mine needs sharpening, judgement dull] and blades do this. Slice: two.

This book shows how to sharpen everything, to make your distinctions fine.

—SB

## Home and Workshop Guide to Sharpening

Harper & Row Publishers, Inc.  
1967, 100 pp.

\$3.95 postpaid

from:  
Harper & Row Publishers, Inc.  
40 E. 33rd St.  
New York, N.Y. 10016

or WHOLE EARTH CATALOG



## Tool Chests

A note on the Gerstner tool chests. In the old days, craftsmen made their own tools and tool chests. When they went for a job, they didn't turn in a resumé, they hauled their tool chests in and the boss looked them over. On the basis of the quality of the work, he was hired or not. Tools and tool chests were very personal things.

Max Pepke  
New York, N.Y.

## Leather Cases

Ray Gfeller, caskmaker, Polton, Montana. Mr. Gfeller makes very good leather pouches and cases. Most of his equipment is designed for geologists, but he has a number of leather pouches that can be carried on a strap over your shoulder.

His cases are the best I've seen. The leather is very heavy and everything is riveted. You just look at them to see how good they are. They just look it and feel it.

I ordered a map case which fits on my belt. It carries a foldup, pencils and rulers. After juggling everything it pack you appreciate it. His prices appear fair. \$15.00 for the case I just described.

He has a pamphlet catalogue available from him directly (but he's really slow) or Lemont Scientific, Inc., Pike St., Lemont, Pa. 16851.

Steve Schlosman  
Belknap, Mass.

## Japanese Saws

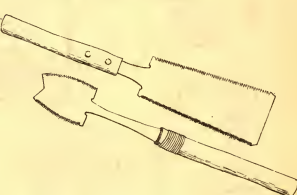
Traditional Japanese saws have a variety of forms to facilitate their elegant joints. But all cut on the pull stroke using two hands (foot hold wood). Many are double-edged, one rip and one cross-cut. They are light, thin, precise, and tireless.

To use a typical western saw after trying one of these is to induce nightmares of two-hundred pound marmos hopping through rice paddies on one foot.

Can you help locate a source of Japanese tools for those who like to walk quickly through the woods?

Ken Freidus  
Warren, Maine

P. S. I think there is an importer in Seattle.



## Japanese Saws

I noticed one of your correspondents was looking for Japanese Saws. PP50, March cut. Tell him to try Japan Airways 15 West Ferry St., New Hope, Pa. 18938 Mrs. Cooper & Mrs. Allison are great people, & will mail order on Unbreakable items. Allison are great people, I've found for saws, also for Japanese papers, etc.etc.etc. ONLY place for Tei sheet paper!!!!

In Peace & hope  
Chris Wolff  
Berkeley Heights, New Jersey

PS Soaking an Ax handle in water is fine for a temporary job, but when the wood dries it will shrink more, & flyng Ax heads result. (A BUMMER)



Blue Ox poured himself some tea. "One time me and Eddie and Winston were stoned on peyote, out in the desert," said Blue Ox. "And the goddamn stars attacked us. You remember that, Winston?"

Winston nodded and grinned a little as he dipped a spoonful of honey into his tea.

"I mean," said Blue Ox. "I mean, like, where do you run to when the whole fucking Milky Way is over your ass, answer me that?"

"You could close your eyes," said Bert.

Norton snorted. "Close your eyes. That's exactly what you'd do to close your stupid eyes."

D.R. leaned across the mattress and touched Estelle's shoulder.

"You want some tea?"

Estelle shook her head and flipped another page.

"One time over in Afghanistan," said Reed. Reed was wrestling with a pillow, trying to fold it so it would support him as he drank his tea. "One time over in Afghanistan, me and Eddie had gone over there, to be big time dealers. We had four thousand dollars between us, and the plan was to score this incredible amount of hash, bring it back and sell it for a million dollars and retire from this fucking shit. So there was a fucking around goddamn Kabul, and who do we run into but this really speeded out American cat who says the best hash deal in the country is in this other town about fifty miles away. So he turns us on and shows us around a little, and tells us how to get to this other town. Of course we're all hot to go, but the thing is, his directions are pretty fucking weird. Like, I don't know how many roads there are going out of Kabul, but the one he put us on was this fucking dirt trail going north across this totally empty country. Not a house, not a road sign, not a goddamn thing except this fucking rut they call a road going north into the country out of Kabul, just me and old Eddie bounding along in the old taxi this other friend of Eddie's had scored somewhere and left it there for us to use because he was going to be gone, some shit like that. I never did understand that car and I was too stoned at the time to care. So anyway we're on this dirt trail, bouncing along looking for this fork in the road, and this guy who's supposed to be out there giving directions

(continued)



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## Cabinetmaking & Millwork

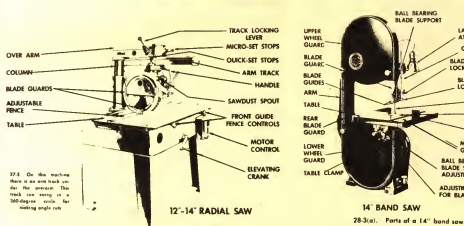
Here is a big expensive book for all you woodworkers. Combine this with Hand Woodworking Tools and assorted other specialized books like Planecraft and you will have just about all you can get into books about cabinetmaking and finish carpentry. Heavy on power tools and machine tools.

[Suggested by Carl Nortenson,  
Reviewed by Fred Richardson]

Cabinetmaking and Millwork  
John L. Farrow  
1967; 928pp.

\$16.68

from:  
Chas. A. Bennett Co., Inc.  
809 West Des Moines Drive  
Peoria, Illinois 61614  
or WHOLE EARTH CATALOG



## Planecraft

If you work with planes and enjoy woodworking, Planecraft is a book to read. It gets into hand planes, their uses, care, and sharpening in a depth I didn't know was possible. The book teaches methods for hand making joints I thought were practical only with machines. These methods are relatively simple and fast, but require skill.

[Suggested and reviewed by  
Fred Richardson]

Planecraft  
C. W. Hampton, E. Clifford  
1934... 1959; 255 pp.

\$2.90

from:  
Woodcraft Supply  
313 Montvale Avenue  
Woburn, Massachusetts 01801



**Sharpening for Plastics.** Plastics, Perspex, Formica, plywood having resin type cements and so on are notorious for their quick blunting of plane blades. Where only small amounts are to be planed, or when this type of work occurs only infrequently, the ordinary sharpening can be used, the quicker blunting of the blade being accepted as a necessary nuisance. If the work comes frequently, however, it is worth while keeping a blade specially for that work, grinding and sharpening it at a blunt angle somewhere near 90°. An edge of this type will last sharp longer than a normally sharpened one. Special steels have been tried for the work but they are relatively expensive and cannot ordinarily be sharpened by the user, and hence have been ruled out. Instead of sharpening all the angle from one side, one user at least has been very successful using a blade sharpened at the normal angle, and then a grinding table off the face side of the blade, thus making a cutting angle approximating to the one recommended above.

To the cabinet-maker, the Circular Plane is of great service in the making of circular frames and serpentine work; and to the carpenter in making circular frames for windows and doors. To the wheelwright, of course, it is indispensable.



## Gilliom Power Tool Kits

Gilliom is a company which sells and manufactures plans, kits and parts for power tools. They carry a 12 inch and 18 inch Band Saw, a Betts Sander, a 6" tilt table bench saw, a shaper, a 10" tilting arbor floor saw, and a combination drill press-lathe. Can buy either the plans (\$1.00) or the kit. The plans and kit make it possible to build your own power tools with Gilliom parts at a fraction of what a pre-assembled tool would cost. The metal parts are included in the kit and you can build the housings out of 3/4" plywood. The plans are simple to follow.

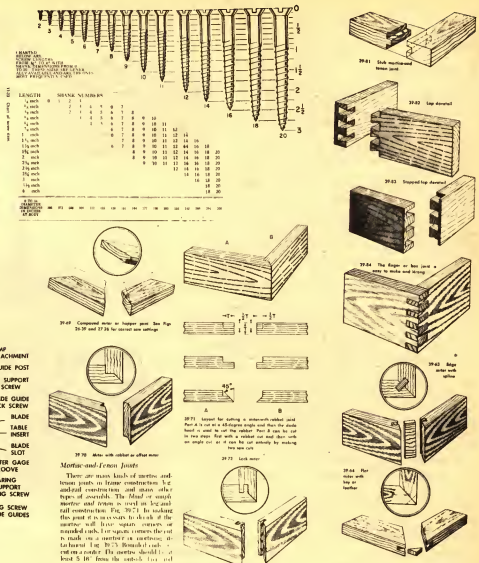
[Suggested and reviewed by  
Marc Lerner]

Information  
free

from:  
Gilliom Manufacturing Co.  
1109 N. 24 St.  
St. Charles, Missouri 63031



Plans \$1.00  
Kit \$18.00



## Rent It

Dear WHOLE EARTH CATALOG:

A very important tool that I think should be mentioned are rental companies. They will rent ANYTHING, tables, saws, trucks, etc. Ask about insurance, transportation clauses, and read ALL the fine print. On some large equipment like dump trucks, cranes, you may need to hire an operator and also trailers are needed for some stuff. The type, kind, and quality vary greatly so easy. Check your Yellow Pages or ask at the local hardware store. The companies go under names like U-Rent-It, Rent-A-Tool, U-Haul, etc.

Yours Truly,  
David Smith  
Mendham, N. J.



That was his job. He was a roadsign. Every day this guy goes to the forks of the road, and he sits there, and people coming by ask him which road to take to where ever they want to go, and this guy tells them. The government pays him and that's his job. Only when Ma and Eddie get there see, the guy ain't there. He's gone. We're at this crossroads out in the middle of nowhere, these roads going three different directions and the guy who's supposed to be the roadsign ain't around. We hang around all day waiting for him to show up, but he never does. It blew me out. That fucking Eddie wanted to lose a goddamn coin, or throw out the Ching or something, and just take a road and see what happened. But it was too freaky for me, man. It pissed Eddie off but I couldn't help it. I mean, I was really counting on that guy being there when he wasn't, the first thing I thought was, 'Maybe even CIA. I didn't want no part of that shit. We wound up not even buying any hash in Afghanistan, except just some to have around and smoke. It was heavy shit.'

Reed tipped his tea as everybody laughed at his story. Most of the people at the funeral had heard it before, had heard Eddie tell it, in fact, and so the laughter was muted, very gentle and low-keyed. Reed lifted the teapot to refill his cup, but nothing came out.

"I'll put some more water on," said Gilded Lily. She got to her feet and tip-toed through the people to the kitchen.



# Craft

## Woodcraft Supply

Some years ago, a large, dour Scot, Mr. Eaton by name, was trying to teach Boston schoolboys how to cut a clean mortise with machine-made carbon steel chisels. He couldn't, and being a Scot and stubborn, he began to import fine hand tools from across the water. He had to buy more than he needed, and he sold the surplus, reluctantly, from a dark cobwebbed shop on North Washington Street. To his surprise, he found that other craftsmen had also thrown shoddy tools through cellar windows in fits of frustration. North Washington Street has been torn up, and Mr. Eaton has passed on to the great work shop in the sky, but his company has become the Woodcraft Supply Corp., 313 Montvale Avenue, Woburn, Massachusetts 01801. It is a unique enterprise that operates contrary to the accepted principles of American business. As any hardware store owner will tell you, no one today will pay \$47.50 for a nickel-plated fitted wood case. You can buy one from Woodcraft—if you are willing to talk about it for an hour and enjoy a good cup of home-brewed tea. Have you ever had your forearm shaved as clean as a baby's with a 1-pound, paring gouge? You're not likely to have the experience many other places. The same personal touch is apparent in everything handled by this unusual company. (They sell a German cabinet-maker's bench of polished red beech that is seven feet long, weighs 300 pounds, is fitted with two built-in vises, and would make most furniture companies blush with shame. \$235.) Woodcraft Supply publishes a large-format illustrated 30-page catalog full of tools that you will never see anywhere else. It costs 25 cents, and you will be a rare craftsman if you don't order something after one pass through it.

[Suggested and Reviewed by Dr. Morton Grosser]

## CARPENTER'S MALLET

No. 7715. Carpenter's MALLET. Angled faces of this beechwood mallet reduce wrist and arm fatigue. The handle comfortably fits hand and the increasing taper towards the head eliminates chance of head working off. Size 5 1/2". Mailing weight 4 pounds. \$27.50.

## CHIP CARVING KNIVES

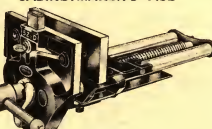
No. 600(6). Set of six knives as shown at the left. Length 5 to 6 inches. Mailing weight 1 pound. \$8.10.

Individual knives as shown at the left. Order by stock number as indicated. Mailing weight 1/4 pound. \$1.50.



WOODCRAFT SUPPLY CORP.  
Circular No. 11-100-1001

## QUICK ACTION CABINETMAKER'S VISE



No. W52XD. Extra high grade. Sliding bars are solid steel and work in accurately machined housing. Has bench top locked by thumb screw. Continuous action. Width of jaws 3 inches, open to 13 inches. Weight 35 pounds. Mailing weight 40 pounds. \$28.75.

## Frank Mittermeier

Fine carving, sculpting, and engraving tools.

[Suggested by Jerome Scuba]

—SB

## Catalog

## free

from: Frank Mittermeier, Inc.  
3577 East Tremont Avenue  
Bronx, New York 10465



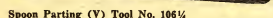
The fastest cutting tools for wood, plastic, etc., and metals up to the hardness of mild steel.  
Surform Round File \$2.95



Spoon Gouge No. 105 1/2  
Width from 2 to 10 mm. each \$2.85



Long Bend Parting (V) Tool No. 106 1/2  
Width from 1 to 8 mm. each \$3.00



Spoon Parting (V) Tool No. 106 1/4  
Width from 2 to 8 mm. each \$3.15

## German Woodcarving Tools

Several months ago I began looking for high-quality woodcarving tools at a reasonable rate. I found that the availability of any tools was not very good (at least in Salt Lake City) and that those available were very expensive.

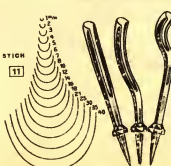
A German neighbor, who may be considered a Master of the Art, gave me this address and said that the quality couldn't be higher:  
Carl Heidtmann  
563 Remschied-Str.  
Unterhollerfeld Str. 46  
West Germany

I ordered eighteen tools and eighteen handles and sent them \$35.00. There was no duty charged me, but I'm told that sometimes (supposedly according to the amount ordered, but in fact the customs agent seems to be the determining factor) a small fee is charged. Eight weeks after I placed my order I received the tools in the mail, well wrapped in wax paper, and \$3.50 credit towards further purchases.

For those who aren't in a great hurry, the quality of the tools seems well worth waiting for.

The catalogs are free, but mine is in German and I'm not sure they have them in English.

Sincerely,  
James Jones  
Salt Lake City, Utah



STION

11

for Section 11-100-1001

## ADZ HEADS



The following two adz heads are usually used with shorter length handles. Sorry but we cannot furnish handles to fit, they are for those who are willing to improvise their own handles.

No. X23. Adz Head, straight 3 1/4" blade. Mailing weight 3 pounds \$6.35

No. X25. Adz Head, curved gouge type, about 2 1/2 inches across the degree of arc is that of a 3-inch circle. Mailing weight 3 pounds. \$6.50

## GENERAL SMOOTHING PLANE



No. HW2. General Smoothing Plane. Beech body with hornbeam shoe. With striking knob. Length about 9 inches, iron 1-7/8 inches. Mailing weight 3 lbs. \$10.80

Replacement Cutter. Mailing wt. 1 lb. \$2.85

## BROAD AX



No. 2210-14. Broad Ax. At last a true broad ax which is used for Hewing timbers from logs. Head weight approximately 4 pounds. Without handle. Mailing weight 5 pounds. \$12.90  
Supply limited. First 100 orders will be filled.

## Paxton Lumber

Beautiful woods, good information, wholesale only.

[Suggested by Fred Borchardt] —SB

Booklet *Beautiful Woods*, 50 pp. \$1.00 postpaid

Set of 46 different sample woods, \$5.50 postpaid

Frank Paxton Lumber Co.  
5701 W. 66th Street  
Chicago, Illinois 60638

## TEAK, Genuine

• KILN DRIED, Rough

1 1/4"	First Class European	154.00	148.00
1 1/2"	First Class European	155.00	149.00
2"	First Class European	156.00	150.00

Besides a treasured wood for furniture of the highest class, Teak is the criterion by which all other woods are judged for marine use. It offers beauty of a unique sort; a well made project of Teak will last practically forever. Should be planned only for advanced students, as Teak is quite difficult to work.

Besides the treasured wood for furniture of the highest class, Teak is the criterion by which all other woods are judged for marine use. It offers beauty of a unique sort, a well made project of Teak will last practically forever. Should be planned only for advanced students, as Teak is quite difficult to work.

## About Woodcarving

In any locale suitable wood may be found for woodcarving. Suitable scraps may be obtained—often free—from lumber yards and furniture making shops. Trees that are "sanitized for progress" at the hands of real estate developers may be excellent if discovered shortly after being felled. They should be cut to desired sizes, and thick trunks are best when quartered, with wedges & ax or with a chain saw. Fresh wood should have all naked surfaces sealed with paraffin to that slow, controlled drying occurs to prevent checking. Leave the bark in place. The time required for adequate drying will vary with the type of wood, the size of the piece, and the ambient humidity. For the impatient who can't wait for completely dry wood, coat with linseed oil after each carving session. This seals the wood and also provides a nice, low-gloss natural finish, but at the same time precludes the use of stain, varnish & shellac. (I think shellac gives carvings a cheap plastic look anyway.)

## Tools

Obtaining good carving tools may be a hassle, especially outside large cities. I have found several good sources for tools:

- 1) Ashley, Ltd.  
Fenside  
East Kirby  
Spilsby, Lincs.  
England
- 2) Woodcraft Supply Corp.  
313 Montvale Ave.  
Woburn, Mass. 01801
- 3) Craftsman Wood Service Co.  
2127 Mary St.  
Chicago, Ill. 60608  
(tools and wood)
- 4) Brookstone Co.  
Dept. C  
4 Brookstone Bldg.  
Peterborough, New Hampshire 03458

All the above will send catalogs on request. Ashley lies has the best prices but the selection varies with what is in production at the moment and the service is slow.

A round-headed mallet is essential. It allows the carver to devote full attention to the cutting edge of his chisel or gouge. It's hard to miss with a large, round mallet, and even if you do, the blow is softer than that from a claw-type hammer.

A Dover, M.D.  
Atlanta, Georgia

wyatt frydenland,  
a student of mine,  
once said  
"do it right the first time."  
now, that's a little bit tightass  
when applied to home done things.  
maybe it should read  
"practice until you can do it  
right the first time."  
or  
"a thing worth doing is worth doing."  
or  
"just go ahead and do it,  
whatever it is,  
and learn from your mistakes."  
or  
"find somebody who knows something  
and learn it from him."  
or  
"through industry we prosper,"  
and all that craft.

-jd



## Constantine's Wood Catalog

Lots of things for woodworking. Prices are high, but if you  
can't get it anywhere else... Lots of fancy woods and finishes.  
Guitar materials. Fancy cabinet hardware.

[Reviewed by Fred Richardson]

Catalog  
84 pp.  
\$25

from:  
Albert Constantine and Son, Inc.  
2050 Eastchester Road  
Bronx, New York 10461

Kind of Wood	Source	Color	Price by the Sq. Ft.
Ayudya	West Africa	Light straw	1.75 \$1.80 1/4"
Bubinga	West Africa	Reddish brown	1.20 1.30 1/2"
Bubinga (Gobson)	Africa	Dark red	1.20 1.30 1/2"
Limba	Africa	Cream	.70 .75 .80 1/2"
Padouk (Veratilon)	East Africa	Reddish red	1.20 1.30 1/2"
Purpleheart	Dutch Guiana	Purple	1.20 1.30 1/2"
Rosewood	India	Dark red, black	2.00 2.10 1/2"
Sandwood	E. India	Dark red, striped purple	1.80 1.90 1/2"
Teakwood	India	Light yellow	1.80 1.90 1/2"
Zelkwood	Burma	Cream brown	1.40 1.50 1/2"
	Kenya, Africa	Dark red, stripes	1.20 1.30 1/2"

Sq. ft. per sq. ft. 1/4" = 2 lb. 3/4" = 3 lb. 6 oz.  
All prices F.O.B. New York

## Craftsman Wood Service

Much the same stuff as Constantine's Wood Catalog. Some  
things cost less, others more. Craftsman has some things  
Constantine doesn't, and vice versa. If you use one of them,  
you really need both. Craftsman has almost anything you  
could think of for fine woodworking, from the wood itself  
to books telling you how, and including tools, cabinet  
hardware (more kinds of hinges, for example, than you  
could imagine), and upholstery supplies. If you would  
like to try your hand at making a violin, they can provide  
you with an instruction book and all the materials (no  
ready-to-assemble kit, praise be).

[Suggested and reviewed by  
Edwin L. Powers]

Catalog  
\$35

Craftsman Wood Service Company  
2727 South May Street  
Chicago, Illinois 60608

## Genuine Honduras Mahogany

Mahogany from Honduras is generally recognized  
as the "King of the Mahoganies."  
You can buy Mahogany grown elsewhere for less  
money but it cannot be compared with this beautiful  
grained wood from Honduras.

Thickness 25 \$1.45 1/4" \$1.45 1/2" \$1.45 3/4" \$1.45  
Price per sq. ft. \$2.43 \$2.43 \$2.43 \$2.43  
Per 100 sq. ft. \$243 \$243 \$243 \$243

## White Northern Hard Maple

Has the same characteristics as birch. Texture slightly  
harder.

Thickness 25 \$1.45 1/4" \$1.45 1/2" \$1.45 3/4" \$1.45  
Price per sq. ft. \$2.43 \$2.43 \$2.43 \$2.43  
Per 100 sq. ft. \$243 \$243 \$243 \$243

## Whitting and Woodcarving

remember sitting by the monkeycage  
at the alliance zoo, (two male  
spidermonkeys with pilled)  
watching a gonydancer (must have  
been a gandy... wasn't an indian,  
it was the middle of the day,  
and he wasn't at work) whitting  
on a chunk of two by four. it  
took him about two hours to carve  
it down into a cage with three balls locked inside.  
I've tried whitting away montana  
nights. turned out a double-ended  
wooden spoon and made the bandaide  
people thirty cents there.  
should've read the book.

-jd

Whitting and Woodcarving  
E.J. Tangerman  
1936, 62, 293 pp.

\$2.00 postpaid

from:  
Dover Publications Inc.  
180 Varick Street  
New York, New York 10014

or WHOLE EARTH CATALOG

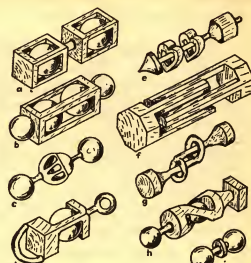
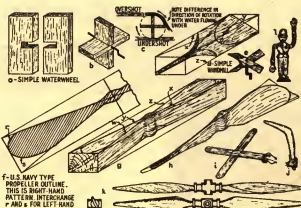


Fig. 94 - Several carvings and chisel points, all based on the ball-in-cup principle



## CHOICE BRIAR BLOCKS FOR SMOKING PIPES

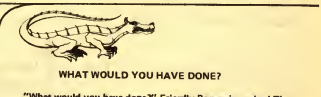
Make your own pipe!

You can carve a rustic-finish pipe, or you  
can lathe the smooth style.  
For popular natural finish of this beautiful  
briar wood, application of clear-gloss high  
grade pipe lacquer is recommended. After  
lacquering, apply polishing compound and  
buff to high polish on buffing wheel.  
BRIAR BLOCKS also 8-2 1/2" for bands or straight.  
No. 108 x 203 Each, \$1.30; Two Blocks, \$2.50  
Sh. wt. 8 oz.  
STRAIGHT BITS. Most popular style. Narrow  
bits doesn't roll. Hard rubber, 11 1/2" diam.  
Length 3" thick.  
No. 108 x 203 Bits, each 30¢; Two for 56¢  
Sh. wt. 8 oz.  
PIPE LACQUER 1 pint \$1.25 Sh. wt. 2 lb.



B-Jorgensen Band Clamp. Indispensable for clamping  
all round and irregular shapes with pre-stretched  
cables of 2" width. Length of band 15 ft.

No. 50C11 (sh. wt. 5 1/2 lb.) \$18.00



WHAT WOULD YOU HAVE DONE?

"What would you have done?" Friendly Persuasion asked The  
Native.  
"What do you mean?" said The Native.  
"At the crossroads. What would you have done?"  
"Do you mean would I have gone with Eddie?"  
"Would you have done, Winston?" asked Friendly  
Persuasion.  
"I would of gone with Eddie," said Winston.  
"I would of thrown the I Ching first," said Chuck. "They  
should have thrown the Ching and gone with it."  
"Not me, man," said Norton. "I would of gone with Reed  
straight back to Kabul and got my ass out of there."  
As people began to think about what they would have done or  
not done in Afghanistan, Divine Right looked around the room  
for a copy of the I Ching. Chuck's mention of it gave him the idea  
to throw it, then and there. He didn't have anything in particular  
he wanted to ask. He just felt like it would be a good idea. When  
there was an opening in the conversation he asked City Girl if  
there was a copy of the I Ching in the house.

"There's Eddie's copy," said City Girl.  
"You going to throw the Ching, man?" asked Reed.  
"Yeah," said D.R.  
"Groovy," said Gilded Lilly as she came in the room with  
fresh tea. "Let's sit it which road they should have taken in  
Afghanistan."

"I'd rather ask it what Eddie was reincarnated as," said  
Blue O.

"I'd rather ask it how you get a job like the roidsman guy had,"  
said Chuck.

"On man, wouldn't that be far out?" said Norton. "Wouldn't  
that be a fantastic job."

"Shit," said Gilded Lilly. "Just sit out there and give people  
directions, send them this way, send them that way."

"Yeah," said The Native. "And people you didn't like you  
could send them the wrong way. Have a whole network of your  
buddies in charge of all the interactions, fuking cops come up  
and say, which way is Kansas City? and you'd say that way, mother-  
fucker, and send 'em to Gallup, New Mexico."

"Yeah," said Chuck. "But good dudes, send them to the  
goodest places there is. Have this big farm, say, have this incredible  
big spread in Kansas City? or Colorado, or some place. And when a  
really good cat would come along, that's where you'd point 'em."

"I'd rather ask who killed Eddie," said Norton. "Some son  
of a bitch killed Eddie and we don't even know who it is."

"You can't ask shit like that," said Bart. "You can't ask  
specific questions."

"The fuck you can't," said Norton. "I ask it specific questions  
all the time."

"If you're not going to ask which road to take in Afghanistan,  
I don't want anything to do with it," said Gilded Lilly.  
"I'm going to watch TV myself," said The Native. And he  
rolled across the floor and turned on the color television.  
As the sound of television began to grow in the room and people  
quit talking about Afghanistan and the I Ching, City Girl motioned  
for D.R. to follow her. Together they stood up and picked their  
way across the people scattered around on the mattresses and dis-  
appeared behind the bedroom door.



## How to Build Your Own Furniture

Unlike most books on do-it-yourself furniture, *How to Build Your Own Furniture* by R. J. DeCristoforo contains no plans on how to build your own furniture. What it does contain is information on what should go into the design of a given piece of furniture to make it function properly. If you have ever built a table that wobbled or a drawer that wouldn't open, you will appreciate this book.

The book gives a wealth of information and illustrations on techniques and methods of quality furniture craftsmanship. There are chapters on materials and general design and construction with separate chapters on each of the different categories of furniture (such as tables, chairs, desks, chests, etc.). The book is very concise and the instructions and illustrations are easily understandable. This is definitely a standard work for the designer-craftsman.

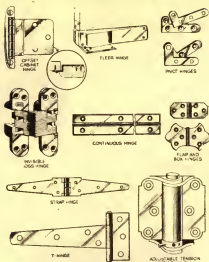
[Suggested and reviewed by Lloyd Martin]



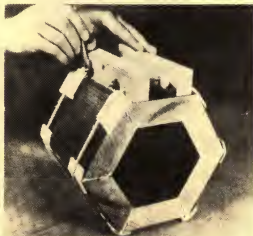
**How to Build Your Own Furniture**  
R. J. DeCristoforo  
1965; 176 pp.  
\$2.50 postpaid

from:  
Harper & Row  
49 East 33rd Street  
New York, N. Y. 10016  
or WHOLE EARTH CATALOG

Choose from a wide variety of hinges to suit a specific project...



Tenon inserted in a slab can be considerably reinforced by a wedge in the slot cut in the tenon to spread the tenon tightly in the hole. Don't make the wedge too thick or you will have trouble getting tenon to "seat".



Improvised setup for clamping irregular work. The "clamp" consists of two hardwood bars, two nuts and bolts and a couple of lengths of line.

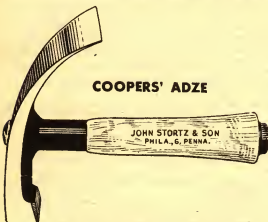
## Stortz Cooperage Tools

Barrel-making is a craft with its own tools. Here they are, expensive and indispensable if you're making barrels.

—SB

Catalog  
\$25

from:  
John Stortz & Son, Inc.  
210 Vine Street  
Philadelphia, Pennsylvania 19106



COOPERS' ADZE



CALKING IRON



BARREL HEAD RAISER



FLAGGING IRON

## Cohasset Colonial Furniture Kits

If you're not going to make your own furniture, you can at least assemble it. These are well-crafted antique reproductions with a clean spare quality to them.

—SB

Catalog  
\$0.50

from:  
Cohasset Colonials  
Cohasset, Massachusetts 02025

Length 19 1/2", width 8 1/2"  
Kit \$18.95 — wt. 5 lbs.



37 1/2" hi., seat 17 1/2" x 21 1/2" wi., rockers 26"  
Kit \$38.95 — wt. 19 lbs.  
Parcel Post or United Parcel Service.

OUR furniture comes to you as a complete "kit." Everything is accurately handcrafted and sanded ready for assembly. All necessary glue, screws, hardware, sandpaper, stain and assembly instructions are included.

## The Wheelwright's Shop

Wow. All you want to know (almost all) about wheelwrighting. Selecting trees, cutting and seasoning lumber, choosing the pieces for the various parts, shaping the stocks, spokes (rhymes with bellies). Tyreing, bending, boxing, etc. Plus much about building waggons and carts.

All this through the eyes of a man, caught up by Rusk in the idea that man's only decent occupation was in handicraft, running a wheelwright's shop through the 1880's. Interesting view of machines displacing skilled craftsman.

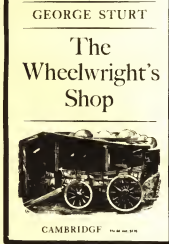
[Reviewed by Fred Richardson]

The Wheelwright's Shop  
by George Sturt, 1923 - 1963

from:  
Cambridge University Press  
32 East 57th Street  
New York, New York 10022

\$1.95

or WHOLE EARTH  
CATALOG



The special problem the sawyers knew how to tackle looks simple enough at the outset. What was it, save to get the timber—the oak, the ash, the elm, the beech—slip or silted into sizes that experts might handle afterwards? Experts already had thrown the timber; others had carted it to the yard; another still—the master-wheelwright—had marked it into lengths and was at hand to direct the sawyers through; and what else was there for them to do, except supply mere brute strength? That looked about all they were fit for, with their stupid brains and brawny arms.

Yet, in point of fact, they themselves, you found, were specialists of no mean order when it came to the problem of getting a heavy tree—half a ton or so of timber—on a sawpit and splitting it longitudinally into specified thicknesses, no more and no less. What though the individuals looked stupid? That lore of the English tribes as it were embodied in them was not stupid any more than an animal's shape is stupid. It was an organic thing, very different from the organized effects of commerce.



## Bamboo

The adoration and utilization of a towering weed.

Civilization as seen by a material.

Every single thing that plastic isn't.

—SB

## Bamboo

Robert Austin, Dana Levy, Koichiro Ueda  
1970; 215 pp.

\$15.00 postpaid

from:  
John Weatherhill Inc.  
720 5th Ave.  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

Bamboo is one of the most extraordinary plants that exist. It flowers perhaps once in a hundred years, and then it dies. It grows faster than anything in the world. In fact, it is sometimes possible to see it growing, just as one can see the hands of a large clock moving: there are recorded instances of bamboo's growing four feet in a single day. In a grove in spring the vitality of the surrounding green pillars is almost palpable. While the stem is growing above ground, the root stops: when the stem has finished, then comes the turn of the other. Bamboo also possesses the characteristic of making its complete growth in about two months only. Thereafter it remains the same size as long as it lives.

But bamboo is interesting for much more than this: it is the most universally useful plant known to man. For over half the human race, life would be completely different without it. The East and all its peoples can hardly be discussed without bamboo's being taken into account. Accepted as a mere fact of life or prized for aesthetic reasons, it touches daily existence at a thousand points which vary as widely as its employment in literature or art. From its use in the walls of houses, it serves the most mundane purposes, and the most refined: dwellings are constructed from bamboo, it is widely used for eating and drinking utensils and for countless other household implements. Ubiquitous, it provides food, raw materials, shelter, even medicine for the greater part of the world's population. The interlocked roots of a bamboo grove restrain the river in flood and during earthquakes support the insubstantial dwellings of country villagers.



Dish scouter of split bamboo

Regarded as a material to work, bamboo shows itself "grateful" — to use the artisan's term. It is flexible yet tough, light but very strong. It can be split with ease, in one direction only, never in the other; it may be pliant or rigid as the occasion demands; it can be compressed enough to keep its place in holes, after heating, it can be bent to take and retain a new shape. It is straight and possessed of great tensile strength.

## Conestoga Wagon

You can still see their ruts on the American land and the American consciousness. Something about spacious skies and twenty more miles and men who feared God but not six straining horses. Six h.p. for freight across the Rockies, can you do that Detroit?

This is a buff's book. A definitive admiration of the wagon, its gear, its construction, its routes, its use, its beauty.

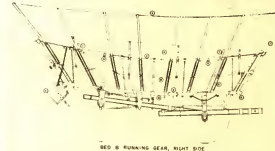
—SB

Conestoga Wagon 1750-1850  
1964-1968; 261 pp.

\$16.00 postpaid

from:  
George Shumway, Publisher  
R.D. 1  
York, Pennsylvania 17402

or WHOLE EARTH CATALOG



So one piece after another was carved out. Now a new pleasure — to fit those pieces together to make the whole complete. The wheel was given the proper "dial" — an arch effect, the tire was the "shock back" and the hub the "keystone," thus giving greater strength to the wheel to carry the greater strain when on the low side of the road; the axles were tapered so that the spokes would stand vertically from the hub down and carry the load and all the angle given from the hub upward; also the wheels were given sufficient "lead" to prevent the hubs from running hard against the collar or the pinch pin.



Bamboo is valuable in controlling soil erosion in areas that are poorly adapted for other crops. It grows well both on steep hillsides and along the banks of rivers, its most important features being the interlocking root system, the much it produces from its leaves, and its habits of propagation without attention. The sympodial types are best suited for this purpose.



## Perkins Reedcraft

reedwork takes time, that's probably why there are so many cane bottom chairs sitting around with the bottoms poked out. my dad learned how to weave reeds a few years ago, had a lot of trouble finding literature on the craft, the perkins people sell and provide the newcomer with good lessons on the basic weaves as well as carrying a complete line of weaving materials.

[Suggested by Judy Rock]

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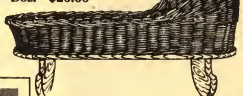
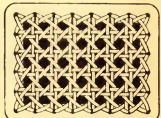
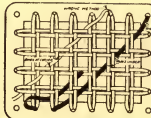


FIGURE C  
RAFFIA



Cathedral ladder back rocker kit \$13.50



BEDROOM SCENE

City Girl lay down across the mattress and reached for some books on a little stand next to the far wall. She straightened up again with Eddie's I Ching in her hand.

"I don't want to throw it right now, but if you want to, this is Eddie's."

And she held the book out to D.R. D.R. took it, but his mind was on City Girl now. Without having anything in particular to say, he felt like he wanted to talk to her, or at least to sit there in the room with her a little while. Something like that was on her mind too, because when D.R. sat down on the mattress beside her, City Girl put her arms around his neck and hugged him. They sat holding each other a moment. Then they fell over on the mattress and lay together a long time locked in a very tight embrace. It wasn't a sexy embrace. It was, actually, but the sex was only one element of something else that was going on between them. City Girl didn't have on any underwear, and D.R. could feel her plainly against him. His leg more or less on its own wedged in between her legs right up into her crotch, and her great breasts pillowed roundly against his chest. And yet it was all just a part of this other, larger thing between them that was going on. City Girl kissed D.R. two or three times on the mouth, and once he kissed her very deeply with his tongue. But nothing led to anything. It was just a crushing physical hello between two people who had a special bond between them, and when they'd said that hello they drew apart and lay on the mattress looking at each other.

Finally City Girl sat up and pushed her hair back and leaned on a pillow propped against the wall.

"I guess we're going to talk about Eddie being dead," she said.

"I s.g. guess so," said D.R. "Is that what you want to d.d.d.?"

"Fuck, I don't know what I want to do. All I know is Eddie's dead, and that's just the farthest out thing I ever heard of in all my life."

"How sad d.d.d. do you feel?" D.R. asked.

City Girl shook her head. "I don't know. Not very, I guess. I don't get sad much."

"I'm fucked up in the head m.m.m.most of the t.t.t. time," said D.R.

"Are you sad now?" asked City Girl.

"You look sad. You look damn beat up, if you want to know the truth. And that's what I think her name?"

"Eddie."

"Jesus. Where'd you get with her?"

"Altamont."

"I was at Altamont."



## ERIC SLOAN

Most craft books, I've noticed, either treat you as a retarded fifth grader or as an ambitious acolyte to *The Craft* of whatever. This book is by a man who grooves on doing his own stuff at his own place, and he makes you feel the same and shortens the route into doing it.

—SR

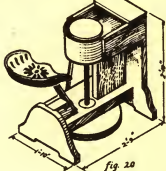
**The Book of Country Crafts**  
Randolph Wardell Johnston  
1964; 211 pp.

or WHOLE EARTH CATALOG



Of all the stones used by the colonists for grave markers none has better resisted the weather than slate. The neat inscriptions on slabs of polished slate show even the light scratches that served as guides to the letterers. Artists should consider this when selecting stones on which to work. Slate is a pleasant material to carve. I have carved a full-size portrait relief in gray slate, direct from life, and I found it possible to use a wooden mallet and wood-carving chisels on the stone. To be sure it took the finest edge off the chisels, but not much more than this. A toothed claw chisel is good for roughing out, as the grain becomes accustomed to the gain. Files, rifflers, sandpaper, and pumice all help in finishing.

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CHAPTER 1. How to work with sheet metals; tin;  
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scavenge,  
prepare yourself for harder times,  
work over a junkpile  
collect the bright shiny goodies  
and broken bb guns,  
save them from the fires,  
and chances are  
somebody else  
will be collecting them,  
too.

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*English country craft, that is. Thatching, basket making, tanning, stone masonry, wheel making. The lot. Cottage industry for the nostalgia market or the total-independence seeker. Make your own goddam barrels.* **CS**

**Traditional Country Craftsmen**  
J. Geraint Jenkins  
1965: 236 pp.

Frederick A. Praeger  
111 Fourth Avenue  
New York, N. Y. 10003



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—SR

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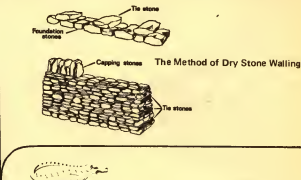
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### Price Guide



They didn't say anything else for a minute, and in the silence D.R. looked around the room. The room wasn't much bigger than the mattresses on the floor, but it had so much light coming in from the windows that it felt like you could live there with your City Girl a couple of weeks, but in that time he had painted serpents and dragons on every wall and ceiling. Behind a table, skinny plant of some kind in the corner Eddie had had a couple of snakes coiled around. The ceiling was lit with green through them and little orange and purple dragons crawling up and down the vine. There was a red dragon on the ceiling. On the wall to the left of the window yellow vines were painted, trailing from the corner near the floor to a corner on the ceiling. Bright orange light streamed through the strings of colored beads hanging down over the window made the whole place seem like an alien world, a colorful, alien world. The pictures on the wall, the pictures were recognizably Eddie's, but something about them was very different from other stuff of Eddie's D.R. had seen.

There was a fraction in them, an order in the general arrangement. The pictures were all different, but they were all of Eddie, not familiar to D.R. It looked as if Eddie had intended to stay in this apartment a while, and D.R. could not get used to that. Eddie had said he was going to stay in City Girl what she and Eddie had had going, but he couldn't be sure. Eddie had said he was going, without actually deciding to say it, was that he had gone to Eddie's body in the funeral home the night before.

"You're kidding me, right?" said City Girl.

"Yeah, M\_m\_m\_e and Estelle went."



City Girl asked D.R. how Eddie had looked.  
"F...fucked over."  
"Did he have a ring on?" asked City Girl.  
"I d...didn't see one."  
"Guess his mother took it off."  
"The undertaker m...might have t...taken it off."  
City Girl shook her head. "No. It was her. She wasn't going to give little Eddie-boy with that ring on his finger."  
"D...did you give it to him?"  
City Girl nodded.  
"I m...might b...be able to get it b...back for you," said D.R.  
"Nah," said City Girl. She scooted across the mattress and stood up. "Nah. Fuck it. It was just a ring. You got the book."  
"Right here."  
"You can have that book if you want it," said City Girl.  
"D...didn't you want it?" said D.R.  
"I thought you one ought to have it," City Girl said.  
"Eddie told me about you. Eddie talked about you a lot. Hey, you want something to eat? I'm hungry."  
D.R. shook his head.  
"Okay," said City Girl.  
Over and touched D.R.'s face with her fingertips.



Probably no region in the country has been written about, "explained" and "interpreted" any more than the Southern Appalachian highlands, that mountainous area embracing parts of Georgia, North Carolina, Tennessee, Virginia, Kentucky and on up into West Virginia. And yet, no region is a little known or more misunderstood. Most of the writers and film documentarians who have paid attention to Appalachia have suffered from one social/economic bias or another, or, what's worse, a party sentimentality inherited from romantic writers of the John Fox Jr.-James Lewis Allen school. Even native writers all too often fall victim to the same stereotypes and clichés that have marred so much of the reportage in the national media.

There are, however, scattered here and there through the Appalachians, a few small journals who are truly in touch with the place they claim to represent. And one of the best of these is *Foxfire*. *Foxfire* is a quarterly publication concerned with researching, recording and preserving Appalachian folk art, crafts and traditions. A typical issue contained articles on quilting, chairmaking, soap-making, home remedies, mountain recipes, leather beds and home-made honey, plus regional poetry and book reviews. One issue was devoted entirely to log cabin building. There are not superficial "feature" articles, but definitive, well-researched treatments of traditional skills and crafts that have come close to dying out of our culture.

*Foxfire* would be a credit to a group of professional folklorists. But when you consider that it is edited and published by high school kids at the Rabun Gap-Norcross School in Rabun Gap, Georgia, it becomes impressive indeed. The thing I like most about it is the way these kids are looking immediately around them for their inspiration, instead of taking cues from New York and California. In their own way, these people are as hip and sophisticated as any writer of a magazine on either coast. More so, even. They're cooler, more adult. Next to *Foxfire*, most "underground" papers seem written by children shrieking at Daddy (or cops, or Nixon) because he won't let them smoke grass or smash store windows. *Foxfire*'s editors and writers land some excellent photographs seen to me as aware of what's wrong with the world as anyone. The thing that distinguishes them from their shrill counterparts in the cities is the absence of bad, slogan and cliché as they set out to improve the world. These kids in Georgia are living in a real world, studying real things, and in consequence they are creating a wonderfully real publication in *Foxfire*. [Reviewed by Gurney Norman.]



FOXFIRE

\$4.00 / year (quarterly)

from:  
The Southern Highlands Literary Fund  
Rabun Gap, Georgia 30568

# POTATO CANDY

Peat and boil one large white potato. When done, mash up with a fork, add a little salt, and pour in a box of confection sugar. This makes a stiff dough.

Roll out on a dough board that has been well floured in a layer 1/4 inch thick. Spread peanut butter all over top. Roll up like a jelly roll [make two rolls if you like]. Put this in the refrigerator.

Cut with knife. Serve. Good any time.

The churner said the chant in time to the up and down movements of the dasher as indicated below. The arrows indicate the dasher movement.



Plate 3: Logs are shaped with a shaving horse and drawing knife.

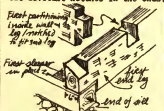
Choose a tall maple, the trunk of which is about 8 inches in diameter and slightly curved. This curve will produce the sloped back obvious in Figure 2. If you would rather the back be straight, choose your maple accordingly.

Saw a 3'6" length out of the curved section of the trunk for the back posts; a 1'8" length out of the straight section for the front posts; and a 1'4" length out of the straight section for the back.

At the same time, choose a tall, straight-grained white oak 4" or 6" in diameter. From the trunk, cut one 16" length, two 14" lengths, and save the rest for spits.

Quarter the maple sections to be used for spits. Split out the heart. Then round the quarters off using first an axe and then the shaving horse. (Plate 3.)

It is now time to choose the placement of the inside walls. If you wish to have a wall running the length of the house, its first log should be laid in place next. If the wall is to run the entire length of the house, cut a log to that length, how it down to 4" in width, and cut dovetail notches in the ends.



Don't worry about the placement of the inside doors. They will be cut after the wall is completed.

## Branch Lettuce

Merrile Lamb: "Well, there is one kind we call branch lettuce. It's kinda a long last thing, and it grows in the wettest damp places. I think not. Men do not live by economics alone. There is a question of morale involved. A world in which everything was ephemeral would not be worth working for. There are overwhelming social and aesthetic arguments for durability in certain things even if, as we are told, there are no economic ones. These are:

First of all, the thing we inherit from the past remind us that the men who made them were like us and give us a tangible link with them. This is a thought to set off against the knowledge that life is short. Hitherto it has been inconceivable that any one generation should discard all the equipment it has inherited and replace it completely. That may yet become possible. Even if it does, it will still be imperative for each generation deliberately to make some of its equipment so that it lasts and survives its makers.

Secondly, if you are making a thing so that it goes wrong or breaks, then, however honestly you state the fact, two other facts remain: first is that you are putting as little into the job as you can decently can. The other is that you are in a fair way to force its use to spend his money on replacing that thing instead of for some other purpose. He may be glad to replace it on an up of materialism and the passion for novelty. But why should we all be compelled to keep spending money on renewing our car, our cooker and our refrigerator? These things for some people are merely means to other ends in life. Why should we not save the money so as to pursue those ends the better, altruistic, learned or artistic ends, say? Things which are made to fail early should be made maintainable and repairable, so that a man who cares for something other than poverty and status symbols can make them last his time respectively while he gets on with his life. Optional durability is what we want.

## Nature and Art of Workmanship

Seems like just about everybody I know is making things lately—pots & dishes & clothes & bags & belts & blouses. I read in Newsweek or somewhere that this is the New Renaissance—Mebbe so. But it doesn't feel good to see a lot of home made things when they are also poorly made. Romanticizing the hand-made is a naive reaction to the problem of a machine-plastic environment. The Nature and Art of Workmanship is an attempt to define the aesthetics of craftsmanship in a classical scholarly mode. It has clear insight and sound criteria for judging the quality of the objects that surround us without the blanket rejection of technology that is trapping many people in an alternative life-style of shoddy creativity.

[Reviewed by Terry Gunesh]

## The Nature and Art of Workmanship

Nature and Art of Workmanship  
David Pye  
1968; 101pp.

\$2.95 postpaid

from:  
Van Nostrand Reinhold Co.  
40 West 33rd Street  
New York, N.Y. 10001

or WHOLE EARTH CATALOG

There is a very present danger that, as the kinds of medium-scale diversity which free workmanship used to impart to building become less readily available, what little can be had in that way will be over-played and in the end treasured. We do not want every piece of concrete to show board-marks, every piece of paving to be cobbled, every piece of masonry to be random rubble, every piece of brickwork to be left unapertured. There is a place for all those things, but such aliphatic care unaccompanied by diversity at smaller scales becomes merely ludicrous. What we want is diversity which begins at the smallest visible scale and develops continuously upwards from that; and even then we do not want it always and everywhere. Vitamins are necessary to life, but only in small amounts. Take them in large amounts and they'll kill you. So I believe it is with diversification in workmanship. I do not suggest it is more—or less—than a vitamin; not a diet; not a panacea; merely something which, though we may not take much notice of it, we need to have.

## Buddhist Economics

The Buddhist point of view takes the function of work to be at least threefold: to give a man a chance to utilize and develop his faculties; to enable him to overcome his ego-centrism by joining with people in a common task; and to bring forth the goods and services needed for a becoming existence. Again, the consequences that flow from this view are endless. To organize work in such a manner that it becomes meaningless, boring, stultifying, or nerve-racking for the worker would be little short of criminal; it would indicate a greater concern with goods than with people, an lack of compassion and a soul-destroying degree of attachment to the most primitive side of this worldly existence. Equally, to strive for leisure as an alternative to work would be considered a complete misunderstanding of one of the basic truths of human existence, namely that work and leisure are complementary parts of the same living process and cannot be separated without destroying the joy of work and the bliss of leisure.

From the Buddhist point of view, there are therefore two types of mechanization which must be clearly distinguished: one that enhances a man's skill and power and one that turns work of man over to a mechanical slave, leaving man in a position of having to serve the slave. How to tell the difference? From the other? The craftsman himself, says Ananda Kumaraswamy, a man equally competent to talk about the Modern West as the Ancient East, "the craftsman himself can always, if allowed to, draw the delicate distinction between the machine and the tool. The carpet loom is a tool, the machine is a machine, and the difference is that for the pile to be woven round them by the craftsman's fingers; but the power loom is a machine, and its significance as a destroyer of culture lies in the fact that it does the essentially human part of the work." It is clear, therefore, that the Buddhist concern for the different facets of the economics of modern materialism, since the Buddhist sees the essence of civilization not in a multiplication of wants but in the purification of human character. Character, at the same time, is formed primarily by a man's work. And work, properly conducted in conditions of human dignity and freedom, blesses those who do it and equally their products. The Indian philosopher and economist J.C. Kumarappa sums the matter up as follows:

"If the nature of the work is properly appreciated and applied, it will stand in the same relation to the higher faculties as food is to the physical body. It nourishes and enlivens the higher man and urges him to produce the best he is capable of. It directs his freewill along the proper channels and disciplines the animal in him into progressive course. It furnishes an excellent background for man to display his scale of values and develop his personality."

If a man has no chance of obtaining work he is in a desperate position because he lacks an income but because he lacks this nourishing and enlivening factor of disciplined work which nothing can replace. A modern economist may engage in highly sophisticated calculations on whether full employment "pays" or whether it might be more "economic" to run an economy at less than full employment so as to ensure a greater mobility of labour, a better stability of wages, and so forth. His fundamental criterion of success is simply the total quantity of goods produced during a given period of time. "If the marginal urgency of goods is low," says Professor Galbraith in *The Affluent Society*, "then so is the urgency of employing the last man or the last man in the labour force." And again: "... we can afford some unemployment in the interest of stability—a proposition, incidentally, of impeccably conservative antecedents—then we can afford to give those who are unemployed the goods that enable them to sustain their accustomed standard of living."

From a Buddhist point of view, this is standing the truth on its head by considering goods as more important than people and people's consumption as more important than creative activity. It means shifting the emphasis from the worker to the product of work, that is, from the human to the sub-human, a surrender to the forces of evil.

While the materialist is mainly interested in goods, the Buddhist is mainly interested in liberation. In the Buddhist is "The Middle Way" and therefore in no way antagonistic to physical well-being. It is not wealth that stands in the way of liberation but the attachment to wealth; not the enjoyment of pleasurable things but the craving for them. The keynote of Buddhist economics, therefore, is simplicity and non-violence. From an economist's point of view, the marvel of the Buddhist way of life is the utter rationality of its pattern—amazingly small means leading to extraordinarily satisfactory results.

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24 Abercorn Place, St John's Wood,  
London, N.W.5, England

## The Book of Tea

this book is not just about tea.  
—J.D.

### The Book of Tea

by Kenichi Okakura

The Book of Tea  
Kakuzo Okakura  
1890, 76pp.

\$1 postpaid

Dover Publications  
180 Varot Street  
New York, N.Y. 10014

or WHOLE EARTH CATALOG

Tea began as a medicine and grew into a beverage. In China, in the eighth century, it entered the realm of poetry as one of the poetic amusements. The fifteenth century saw Japan ennoble it into a religion of aesthetics. —Teaism. Taoism is a cult founded on the adoration of the beautiful when the sordid facts of everyday existence. It inculcates purity and harmony, the mystery of natural charity, the romanticism of the social order. It is essentially a worship of the Imperfect, as it is a tender attempt to accomplish something possible in this impossible thing we know as life.

The Philosophy of Tea is not mere aestheticism in the ordinary acceptance of the term, for it expresses conjointly with ethics and religion our whole point of view about man and nature. It is hygiene, for it enforces cleanliness; it is economics, for it shows comfort in simplicity rather than in the complex and costly; it is moral geometry, inasmuch as it defines our sense of proportion to the universe. It represents the true spirit of Eastern democracy by making all its votaries aristocrats in taste.

## Craft Shops/Galleries

**Craft Shops/Galleries USA** is a directory of workshop showrooms, galleries and shops selling American crafts. It contains the names and addresses, regular exhibitions, and crafts media handled by over 600 outlets. This is a potentially invaluable guide to: 1) craft collectors; 2) craft makers; 3) shopkeepers or future shopowners who would like to hear from No. 2 and reach No. 1. (All shops interested in being contacted by craftsmen are marked with an \*.) Additionally, it contains other sources of information on craft exhibitions.

This book is published by the American Crafts Council, a non-profit organization founded in 1943 to stimulate public interest in and appreciation of the work of craftsmen. [Suggested and reviewed by Judith Greer]

American Crafts Council  
29 West 53rd St.  
New York, N.Y. 10019

## Craft Horizons

Craft as Art —SB

Craft Horizons

Rose Siliva, ed.

\$10.00 /yr (bimonthly)

from:  
The American Crafts Council  
29 West 53rd St.  
New York, N.Y. 10019

When will the West understand, or try to understand, the East? We Asiatics are often appalled by the curious web of facts and fancies which has been woven concerning us. We are pictured as living on the perfume of the lotus, if not on mice and cockroaches. It is either implicit fanaticism or else abject voluptuousness. Indian spirituality has been derided as ignorance, Chinese sobriety as stupidity, Japanese patriotism as the result of fatalism. It has been said that we are less sensitive to pain and wounds on account of the callousness of our nervous organization!

Why not amuse yourselves at our expense? Asia returns the compliment. There would be further food for merriment if you were to know that the most of our small empires are still at war. All the glamour of the perspective is there, all the unconscious harmony of crime, all the silent resentment of the new and undefined. You have been loaded with virtues too refined to be envied and accused of criminal plot picturesque to be condemned. Our writers in the past—the wise man who knew, informed us that you had busy tasks elsewhere hidden in your garments, and often defined off a forsaken newborn babe Nay, we had—something was against you; we used to think you the most of our people on the earth, for you were said to preach what you never practiced.

In joy or sadness, flowers are our constant friends. We eat, drink, sing, dance, and flirt with them. We weed and cherish with flowers. We dare not die without them. We have worshipped with the lily, we have meditated with the lotus, we have charged in battle array with the rose and the chrysanthemum. We have even attempted to speak in the language of flowers. How could we live without them? It frightens one to conceive of a world bereft of their presence. What solace do they not bring to the bedside of the sick, what a light of bliss to the darkness of every spirit? Their serene tenderness restores to us our winning confidence in the universe as the intent gaze of a beautiful child reveals our lost hopes. When we are low in the dust it is they who linger in sorrow over our graves.

Sad as it is, we cannot conceal the fact that in spite of our conventional ideas we have with flowers, and with the world, the brute. Scratch the sheepskin and the wolf within us will soon show its teeth. It has been said that man at best is an animal, at twenty a lunatic, at thirty a failure, at forty a fraud, and at fifty a criminal. Perhaps he becomes a criminal because he has never ceased to be an animal. Nothing is real to us but hunger, nothing sacred except our own desire. Shrine after shrine has crumbled before our eyes, but one altar forever is preserved, that wherein we burn incense to the supreme idol—ourselves. Our god is man, and man is his Prophet! We deviate narrow in order to make sacrifice to him. We boast that we have conquered Matter and forget that it is Matter that has enslaved us. What atrocities do we not perpetrate in the name of culture and refinement!

## GEORGIA

### Atlanta

**THE CO-OP CRAFT STORE OF ATLANTA**, 140 Spring Street, N.E. (Zip 30373) 104, Mon-Sat. Owned by the Georgia Mountain Arts Products Cooperative. Appalachian pottery, ceramic sculpture, wood accessories, rugs, woven accessories, leather, silk screen, dolls, mountain novelties. Craft demonstrations every other weekend.

**THE SIGNATURE SHOP AND GALLERIES**, 3267 Roswell Road, (Zip 30305, Tel. 237-4223) 9:30-5:30, Mon-Sat. Blanche Reeves, Sally Adams, owners. Pottery, wood accessories, jewelry, holloware, linens, quilts, tapestries, wall hangings, rugs, woven accessories, glass, enamels. Occasional exhibitions.



ESTELLE AGAIN

D.R. started to throw the I Ching by himself when City Girl went out, but he didn't have any coins on him. He was focused so well on what he was about to do he didn't much want to interrupt it to go outside to ask somebody for some coins. But then he remembered that maybe that was part of it, that maybe his not having any coins on him was crucial to the reading somehow, and so he yielded to that and went into the living room.

The scene had changed a good deal since City Girl had left. Everybody except Estelle was down up in front of the TV to watch an old Charlie Chan movie called *The Big Secret*. Friendly Persuasion and Wisteria had a joint point pick and Estelle knew that nobody else seemed much interested in it. They were all into the number Charlie Chan was doing with the Door to the Mystic Palace. The drama was absolutely feet high, and made out of some kind of shiny metal, with a big dragon embossed upon it. You could tell just by looking at it that a tank would have a hard time breaking it down. And yet, by fiddling around with the symbols of the dragon, old Charlie was about to spring the whole thing and enter the Mystic Palace. Everybody was so into the program D.R. didn't want to disturb them, so he did the next best thing and went over to Estelle in the hall.

"Have you got any coins?" asked D.R.  
Estelle looked up at D.R. It was the first time their eyes had met in what seemed like days. D.R. and Estelle had been waving some kind of silent combat ever since his acid trip, and the business with the Greek. Neither of them knew what the issue was, but they both knew that it was serious, whatever it was. Except for the four hours D.R. worked at the See-More Store that he spent close together ever since they got to St. Louis, but their minds were in separate, and hostile, galaxies. They had only been in St. Louis thirty-six hours, but that, too, seemed like days. Eddie St. Louis had suddenly had lifted St. Louis out of time onto a plane where each moment is forever. Death is an infinity, and so is thirty-six hours of life in St. Louis when you're not speaking to someone you ostensibly love. I ostensibly love you, Estelle, thought D.R. And ostensibly I love you too, thought Estelle. The meeting of their eyes was filled with cold, ostensible love and both thought what in god's name is happening.

(continued)



## Craftool

More than other craft suppliers, this outfit has whole-system supplies. A spinning wheel as well as looms. Various hand presses. A whole paper-making mill (\$3,650). And the best line we've seen of beginning kits. —SB

[Suggested by Julia Brand and Cynthia Mathews]

## Catalog

\$1.00

from:  
The Craftool Company  
1 Industrial Road  
Woodbridge, New Jersey 07075

Woodworking/Craft Kit \$79.95 +  
Gem Stone/Tumbling & Jewelry Making Kit \$24.95  
Batik/Fabric Dyeing Kit \$24.95  
Bookbinder's Repair Kit \$14.95  
Clay Modeling & Sculpture Kit \$24.95  
Woodweaving & Sculpture Kit \$34.95  
Graphic Arts/Etching & Book Printing Kit \$49.95  
Jewelry Making Kit \$59.95  
Stone/Sculpture Kit \$24.95  
Printing Press/Outfit \$99.95



### CRAFTOOL COMPLETE BOOKBINDING OUTFIT

All the basic equipment and tools necessary for the bookbinding profession.

Shedding Press 1400-B Shavers Drill  
Shedding Press 1500-AZ Backing Hammer Ripper  
Lying Press 1500-AZ Backing Hammer Glue Brush  
Book Saw Hand Sander Bone Folder  
Book saw "Bookbinding" 2 Fines Wire  
No. 3800B—Complete with laminated top bench 24"x48"  
+ 32" high \$248.00  
No. 3801-43—Tools and equipment only—less bench and top \$215.00



## Sax Art Supplies

Big catalog, sort of school oriented, wide range of art and craft supplies. —SB

[Suggested by Karen Shuler]

## Catalog

\$1.00

from:  
Sax Arts & Crafts  
207 N. Milwaukee St.  
Milwaukee, Wisconsin 53202



### BATIK FORMULA WAX

Special formula wax.

No. 12738.....\$1.90 lb.  
1 gallon (including hardener) 14.88  
50 or more lbs. .... 1.60 lb.  
50 or more lbs. .... 1.60 lb.

### STONEWARE CLAY CONES 4-8.

A true stoneware clay, when fired at the recommended temperature of Cones 4 to 8 blague, is a warm buff peppered throughout with dark specks. Interesting textures. Amaco High Fire Glaze recommended for this stoneware body. Specify No. 48-M (Moist) or No. 48-D (Dry).

5 lb. .... \$1.00  
50 lb. .... \$6.50



## Arts & Crafts

This catalog looks like it's more for the school trade. Good prices on a wide range of tools and materials. —SB

[Suggested by Mrs. W. B. Mohin]

## Catalog

from:  
CCM: Arts & Crafts, Inc.  
321 Park Avenue  
Baltimore, Maryland 21201

free

## Art Consultants

Stuff for sculpture and ceramics.

—SB

## Catalog

free

from:  
Art Consultants  
97 Saint Marks Pl.  
New York, N.Y. 10009

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ARTIST'S EQUIPMENT &	

## Step-by-Step Craft Series

A fine, low-priced series of introductory craft books. Each one has a thorough list of relevant periodicals, books, material suppliers, and schools which give courses in the subject. It's an intelligent way to begin—light, quick, and real.

(Suggested by Jan McClain)

### Step-by-Step Jewelry

Thomas Gentile  
1958; 96 pp.  
\$2.50 postpaid

### Step-by-Step Weaving

Nel Znamerowski  
1967; 96 pp.  
\$2.50 postpaid

### Step-by-Step Macramé

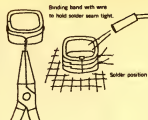
Mary Walker Phillips  
1970; 80 pp.  
\$2.50 postpaid

### Step-by-Step Printmaking

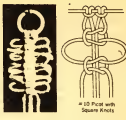
Erwin Schuchner  
1970; 80 pp.  
\$2.50 postpaid

from:  
Golden Press Division  
Western Publishing Co., Inc.  
850 Third Avenue  
New York, N. Y. 10022

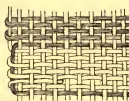
or WHOLE EARTH CATALOG



Jewelry

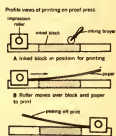


Macramé



When working with two colors, the color ink on top is spread along the line and used again. This is a method for various color effects. Note the start of the block being used for each color.

Weaving



Printmaking

## Allcraft

Excellent catalog of tools and materials for jewelry work and enameling. Also stained glass.

Catalog  
\$1.00

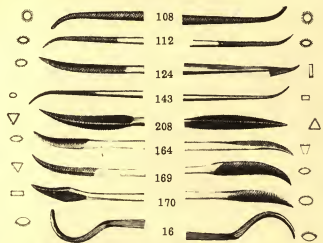
from:  
Allcraft Tool & Supply Co.  
215 Park Ave.  
Hicksville, N. Y. 11801



2N-5 FORMING HAMMER - 4-1/8", flat face 1", round face 1" - 3/4 lb.

EA-753

BROKEN GLASS ASSORTMENT  
Random sized pieces ranging up to approximately 3" x 2". Each assortment contains 12 or more colors. \$1.50 2 lb. box



1H-16 HOME WORKSHOP OR SCHOOL GRADE  
Available in styles 5, 6, 7, 10, 17, 101, 181, 126, 108, 112, 208, 16. \$1.75 each

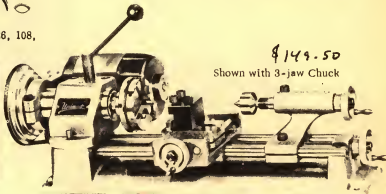


EA-669  
MORTARS AND PESTLES for grinding enamels to a consistency for painting and special effects.  
a. Wedgewood 3 1/2" dia. \$5.15  
b. Wedgewood 4" " \$5.55  
c. Wedgewood 5" " \$6.45



\$18.00 Set of 25

SA-1 Chasing Tools



\$149.50  
Shown with 3-jaw Chuck

## Dixon Tools & Supplies

A beautifully engraved hard cover catalog of splendid jeweler's and engraver's tools. (See also p. 142.)

William Dixon, Inc.  
Carlstadt, New Jersey 07072



Fig. 156-2  
COPPER BOILING CUP  
2" diameter by 1 1/2" height; furnished with \$7.40 and without cover.

No. 1 With Cover No. 2 Without Cover



No. 15, 3/4" Face \$2.95

Fig. 76-30  
Long Slim Tapered Chain Pliers

Length overall 6".  
Length of jaws 3 1/2".  
Width of jaws 5/16".  
A fine plier for reaching difficult places. Jaws make it adaptable for electronics.

\$7.40

## Otto Frei

Jeweler's and engraver's supplies.

Otto Frei-Jules Borel Inc.  
Box 796  
Oakland, CA 94612

## PEER MAGNIFIERS

Imported high quality magnifiers with specially corrected lenses that give good distortion free viewing.

No.	Style	Working Distance	Power	Price
22-411	Doublet	1" 10X		\$8.19
22-418	Coddington	4 1/2" 15X		\$8.00



## ANTI-RUST SOAP

Prevents rust caused by perspiration from your hands. Simply wash hands twice daily using this soap.

No.	Description	Each
82-771	Cake	\$2.80



## GOING THROUGH CHANGES

The I Ching was what was happening. Estelle took three pennies out of her bag, handed them to D.R., then turned back to her book. The way she did it, the way she fished in her bag for the coins and handed them to him as if he was collecting for the Heart Fund or something, infuriated D.R. He came close to throwing the coins right in her face. His next impulse was to jerk the book out of her hand and fling it across the room.

Fuck it! he yelled inside his mind. Fuck it! In the bedroom with the door shut D.R. took his place on the mattress again and worked at cooling his mind with some of the alternate exercises the Greek had taught him. He tried to do alternate nostril breathing but he was so stirred up he didn't have enough patience to hold his breath for sixteen counts. Bellows breathing was easier. Huffing and puffing, doing them in sets of twenty, then twenty-five and finally thirty-five, D.R. stoned himself on breathing. His mind joined him on the mattress and at last he felt cool enough to toss the coins.

He didn't feel that way long. The first goddamn throw came up fucking Stagnation and he didn't want to read about it. He knew it was a sin not to accept the reading but he didn't give a shit. He threw the coins again. It came up Adversity and Weariness. He threw them again. It was The Estranged this time. Opposites. Fuck opposites. He threw them again. It was Ku, Decay, with changes in the third, fifth and sixth nines which gave him Abysmal, The Abyss. Fuck it. It was Eddie's I Ching, it was Eddie's room, fuck it. Eddie's dead, and Divine Right threw this book across the room, then burst into the living room and told Estelle to get off her ass, they were going to the Western Union office.

Estelle looked up at D.R., half expecting to be afraid. But she wasn't. She got up and went out with him, but she definitely wasn't afraid.

Jewelry Supplies Craft

155



## Metal Techniques for Craftsmen

If you read this book, you'll know more about metalworking than just about anybody you know. International in scope, it covers an incredible collection of techniques from many countries and cultures. The various techniques are presented with a complete set of instructions for each one and are illustrated by excellent photographs, often of native craftsmen doing their thing. Tools are described and illustrated in detail. Everything is described in detail. Reading this book will take you right up to that point where you'll have to do it while yourself to get into it any further. This is a real assembly of diverse information, some of it hard to find, and a metal-crafter-jeweler should be into new things within an hour of getting his hands on it. This is one of those rare and super books written by someone that wanted to lay his trip on others. Well worth the money. The "definitive text", as they say.

[Suggested by Claudio Marzollo.  
Reviewed by J. Baldwin]

**Metal Techniques for Craftsmen**  
Oppl Untracht  
1968, 509 pp.

**\$19.95** postpaid

from:  
Doubleday & Company  
501 Franklin  
Garden City, New York 11531  
or WHOLE EARTH CATALOG



A craftsman of Tanjore, India, securing an encrusted silver ornamental medallion on a brass plate in the "naga" or "swami" process of metal decoration.



**SAND CASTING OF ALUMINUM.** Sand casting is the best-known and most frequently used casting process. (For a procedural discussion, see page 225.) The method used for aluminum is the same as that used for other non-ferrous metals, with care taken for temperature control. In small sand casting, a section of 3/16 of an inch is considered the minimum possible. The surface of sand castings depends for its character on the fineness of the sand used. For large castings, coarser sand is advisable. Aluminum sand castings generally have smoother surfaces than other sand cast metals, partly because of the lower melting point required of the metal, and partly because the sand does not burn into the surface of the casting.

Forge welding is the oldest welding process. Wrought iron and mild steel can be welded in forging by heating the parts to be joined till they are brilliant white-hot and emitting sparks. The metal at this point has reached a condition of surface plasticity. The parts are then brought into contact quickly, on top of each other, and hammered together. They fuse into one unit. But joints can be welded by first upsetting the ends to be joined, to thicken them, then reheating the ends to welding temperature, placing them together, and hammering them. The original thickness is maintained. If the metal is absolutely clean, free of oil or oxide, no flux is necessary, because the slag in wrought iron acts as a flux. The force to be exerted by the hammer depends on the mass and size of the parts being joined.



Greek bronze were fibula, "spectacle type," tenth-eighth centuries B.C. (Geometrical Period). Back view. Length, 5 1/2 inches. This pin, including the pinstem and catch, is made entirely of one continuous piece of wire. Metropolitan Museum of Art, New York. Fletcher Fund, 1937.



Sterling silver necklace utilizing 18-gauge metal, by Mary Ann Scherr. Length, 16 1/2 inches, each unit 3 1/2 inches by 1/4 inch. The intaglio pattern was created with an etching solution of half nitric acid and half water and was then oxidized.

## Jewelry Making and Design

superfluous middlefinger rock rings, grandma's brooches, reprint of design manual from about fifty years ago, studies in geometrical patterns and better yet, suggestions for lifting design from shell, bud, leaf, bug, snow crystal, finger, and so forth. fairly complete metalworking how-to illustrations and procedural techniques for modeling, casting, piercing, enameling, carving, cheap too.

—jd

[Suggested by Joseph R. Coelho]

## Jewelry Making and Design

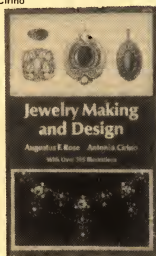
Augustus F. Rose and Antonio Cirino

1918, 67, 304 pp.

**\$2.75** postpaid

from:  
Dover Publications Inc.  
180 Varick Street  
New York, New York 10014

or WHOLE EARTH CATALOG



There are different ways of approaching the subject of jewelry making. Some begin by having the student or beginner take for the first problem one that calls for the use of wire bending and soldering. Others give a problem calling for the introduction of a variety of processes in one piece. Experience shows that the best and most satisfactory results are obtained both from the student's point of view and the consideration of the finished product when the student is led to advance from the simple problem to the more complex by a series of elementary problems carefully graded. The beginner has not only to learn the processes involved in the making of a piece of jewelry but also to master the various tools used and to learn the limitations of his material. Although the number of tools used in jewelry making are few, it seems best for the beginner to take them up one or two at a time and plan his problem accordingly.

The Processes involved in jewelry making are as follows:  
Sawing, Filing, Bending, Carving, Embossing or repousse,  
Soldering, Stone Setting, Polishing, Coloring, Pickling,  
Modeling, Casting, Annealing.



## Creative Glass Blowing

This well-illustrated and carefully written book begins with the statement "Any one can learn to blow glass." To a large extent, the authors, one of whom is a professional glass blower, succeed in making that statement believable. However, the first 50 pages are concerned with the tools of the glass blower and I found myself wondering, "Yes, but can anyone learn to be a pipe-fitter, metal worker, carpenter, and electrician?" If you can do those things, there is little doubt that this book (and several hundred dollars worth of tools and related supplies) will enable you to blow glass—probably creatively.

Don't expect to take up glass blowing casually, with just this book, but if it is a hobby to which you can commit yourself seriously this book would be an excellent investment, for starters.

There is a page at the end that lists sources of tools and materials. Unfortunately, there are only a few suppliers mentioned, all of whom are in the East. Alas, we westerners need a special supplement, obviously.

[Reviewed by Richard Raymond]

**Creative Glass Blowing**  
James E. Hammesfahr, Clair L. Stong  
1968, 196 pp.

**\$8.50** postpaid

From:  
W. H. Freeman & Company  
660 Market Street  
San Francisco, CA 94104

or WHOLE EARTH CATALOG

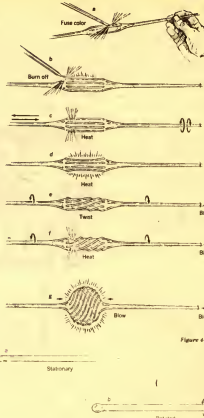


Figure 4-35.

Here, then, is the first skill you must develop in the course of becoming a glass blower: the knack of rotating hot glass at a rate that precisely counteracts the force of gravity. The trick is not difficult to master if you follow a few simple rules. First, never soften more glass than you need for making a desired form. If you intend to impart a rounded shape to the end of a rod, heat only the tip. Second, never soften the material more than necessary to accomplish your objective. Obviously, soft glass is easier to control than runny glass. Watch the work as it softens and changes form. Alter its position in the fire to take advantage of gravity, or to offset the effect of gravity, as the case may be. This is accomplished by rotating the work.

## Glassworks

studio equipment for glaziers, marvers, and gaffers . . . kilns, furnaces, clay tanks, benches, tables, blowpipes, all hand built.

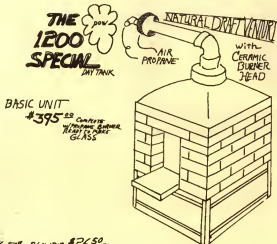
—jd

[Suggested by Bruce McDougall]

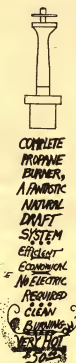
Catalog

\$0.25

from:  
The Glassworks  
Box 202  
Warner, New Hampshire 03278



1" TYPED SS HEAD, 1/2" CLOS SHANK, 1/2" BLANK, 1/2" 660  
POINTS, 1" TYPED SS HEAD, 1/2" CLOS SHANK, 1/2" 660 (HAND PIPE TO BLOWER'S MOUTH)  
1/2" 660



## Working With Glass

There aren't many books on working with glass. W.E.C. lists only one and that is mostly about glass blowing. May I recommend: "The Encyclopedia of Working With Glass", Milton K. Berlye, 1968. Oceana Publications, Inc. Dobbs Ferry, N. Y. \$12.50. It covers the entire subject very well, including fiberglass.

A. W. Griffin  
Van Nuys, CA



ANGEL'S FARM

The money from D.R.'s sister turned out to be twenty-five dollars instead of the fifteen he had asked for. At some earlier point in their trip together such a delightful surprise would have sent D.R. and Estelle into little dancing ecstasies and racing to the nearest candy store to buy a bag of jelly beans. But they were so far from joy right then that ten times that amount could not have given them pleasure. D.R. put the money in his pocket and went outside where Estelle was waiting, leaning against a telephone booth.

"I went to call Gail," she said.

"C.e.-call?"

"I want to call Gail. Give me a dime."

D.R. felt in his pocket. The Western Union lady had given him some change but it was all in quarters.

"Give me a quarter, then. I'll get it back. I'm calling collect."

D.R. handed Estelle a quarter. She went in the phone booth with it and slammed the door. A few minutes later D.R. saw her hang the receiver on the hook and storm furious out of the booth.

"Shit?"

"What's what . . ."

"Her old man answered and refused to accept the charges."

"Shit."

"Let's p.p.-pay for the c.e.-call. We can afford it."

"Fuck it," said Estelle. "Let's go."

"Let's c.e.-call the Flash," said D.R. "He'll accept it." Estelle shrugged. She was leaning against the bus now, her arms folded across her chest, looking at the sidewalk. "Call him," she said. "I don't care."

D.R. went in the phone booth and asked the operator to connect him with the Anaheim Flash in Anaheim, California. He listened to the phone ring, he listened to the Flash tell the operator he would accept the charges. He heard the Flash's soft, leonine voice say, "Hey man, what's up?"

"N..n..nothing," D.R. stammered. "N..n..nothing's up."

We just wanted to call somebody. We're in St. Louis."

"What's wrong, man?" asked the Flash. "You sound like you got epilepsy or something."

"N..n..no," said D.R. "It's this th..thing. It's my t..tongue. It's getting b..b-better. Listen, d..d..did you hear about Eddie?"

"Yeah," said the Flash. "Fucking bumme."

"We g..g..got here after it happened. We b..b..been in St. Louis t..t..two days."

"That's two days too long for me," said the Flash. "You better get back out here to the land of sun and fun. Where's Estelle?"

"Right here," said D.R. "You want to s.p.-speak to her?"

"Sure. Put her on. I've got a message for her from Angel."

(continued)



— — — — —

## Candlemaking

I've been making candles for about a year now as a supplementary income for family of me, wife and bouncy baby boy, and I think I can make some useful suggestions and at the same time do a review of some candle supplies.

**First—wax.** Don't buy wax in the grocery store. It comes in one lb. boxes for sealing jelly and is prohibitively expensive. I used to buy wax from a local hobby store (American Handicrafts)—if you don't have anything against using names, until I noticed that their supplier was in Phila. So I went to the supplier and got it much cheaper. Until someone told me about getting wax from the oil companies which have refineries in Phila. So now I get wax from companies like: Atlantic-Richfield, delivered to my door (300 lb.—I've 50 lb. cartons; six 10 lb. slabs per carton minimum order for free delivery) for only 12¢/lb. Compare that to the hobby store price of 11 lb. for \$3.50 = 32¢/lb. So try getting wax from oil companies near you.

**Next—molds.** American Handicrafts has molds which work pretty well, but they are somewhat limited in variety. Another source of molds—somewhat higher in price but also excellent quality is Poirette Mfg. Co., 6814 Roosevelt Way N.E., Seattle, Wash. They also carry dyes, scents, wick, etc. etc. You can also use things like milk cartons, wine bottles, light bulbs, shampoo bottles, or sand to mold candles. Or if you have access to materials—sheet metal—and rods—soldering iron and sheet metal press—make your own molds.

**Third—dyes.** The best place I've found for dyes is the

J. & E. Pollak Co.  
1036 Monroville St.  
Brockton, Mass.

They have about 2 dozen colors—including shrimp, sunshine yellow, cherry, red, red, and mandarin to name a few neat names. The dyes are 1/2 oz. cakes of "concentrated" candle colors (at \$3.50 per dozen) and are advertised as coloring 10-15 lbs. of wax but I've done much more sometimes.

J. & E. Pollak also makes the best concentrate perfume oils I've used. To have about a dozen scents including hollyberry, coconut, apple blossom & cinnamon. (And the coconut really smells like coconut!)

Poirette carries the widest variety of wick I've found. I don't advise using string—candle wick is woven with a single tight strand so it bends over and burns right and is also treated chemically I think.

I think that's about all—wax, wick, dyes & scents. One warning—candle making can be a messy process if you spill wax around, so put down newspaper. Another warning—heat wax in a double boiler—never directly over a flame.

Go to a restaurant or cafeteria and get empty cans. If you're lucky, they will have 8 & 9 quart cans, which will make great free double boilers.

I forget to say that you will probably have your choice of melting points if you get wax from an oil company. After experimenting with several I have found 145-148° wax the most versatile stuff. If I'm not careful this is going to turn into a book on candle making so I think I'll stop here.

Pax,  
David Inouye  
Swarthmore, Pa.

## The Japanese Art of Miniature Trees and Landscapes

This is the ultimate in model-making. Tiny trees in tiny scenes, and a careful, happy person hovering in the sky nearby. This book is really thorough on the science and the art of bonsai. The standard work.

—SB

The Japanese Art of Miniature Trees and Landscapes  
Yui Yoshimura and Giovanna M. Hafford  
1957; 220 pp.

\$6.50 postpaid

from:  
Charles E. Tuttle Company  
28 S. Main St.  
Rutland, Vermont 05701  
or WHOLE EARTH CATALOG



## Modern Art of Candle Creating

There's lots of wimpy books on candle-making, and this is one of them. But it's better than the others—more and wider technique.

—SB

## Modern Art of Candle Creating

Don't miss this  
1963; 152 pp.

\$7.50 postpaid

from:  
A. S. Barnes & Co.  
Box 421

Greenville, N. J. 08512

or WHOLE EARTH CATALOG



## RULES TO REMEMBER

To get the most out of your mold, abide by the following rules:

Never strike it with a hard object.

Never place it in an oven with a temperature exceeding 175 degrees.

Never scratch the interior with a sharp instrument or abrasives.

Never loan to friends unless they know how to care for it.

Store in a warm, dry place to prevent rust; keep covered to protect interior from dust.

If you should find it necessary to clean your mold of contaminated or "stubborn wax," use one of these methods:

Easy Method. Pour your next candle with the wax at 230 degrees. This usually cleans the mold and absorbs stubborn wax.

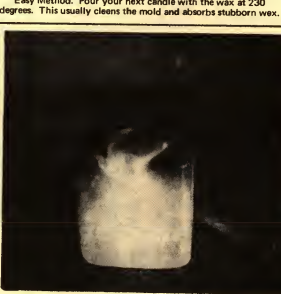
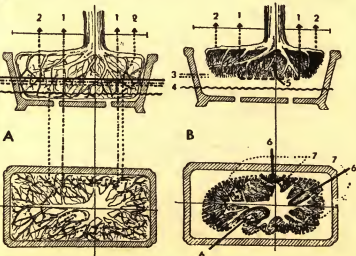


Fig. 17.—Removing old soil and trimming roots. A) Before beginning. 1) Lines mark two-thirds of old soil to be removed in 2nd Step of cleaning. 2) Lines mark one-third of lateral roots to be trimmed away. 3) Lines mark one-half of old soil to be removed in 3rd Step, and, in the case of deciduous trees only, of bottom roots to be trimmed away. 4) Line marks bottom roots to be trimmed from evergreen needle trees. B) After finishing. 5) Remaining nucleus of old soil. 6) Alternating slices of old soil removed this potting in 4th Step. 7) Slices to be removed next potting.



## Celebration! Candle Supplies

We have a candle "factory" and shop here in Northern Michigan. In our attempt to produce the best quality candle at the lowest cost we have experimented with many dye and scent manufacturers, wick making companies, mold makers, etc. We now have excellent sources for our materials and find that, since it is cheapest to buy them in large quantity we are in a position where we can break the supplies down into smaller quantities and retail them. Not only are our supplies better than anything we've found available to the general public, we can underbid anyone else's prices.

Here, for example, are our new prices compared to others: Dye—we can provide enough dye to color 20 lbs. of wax for 30 cents. Poirette, a national candle supply busker, will sell you enough to do 10 lbs. for 25 cents; dye for 50 cents—they don't care if you don't know if they are on the West coast or not, will tell you dye for 12 lbs. for 39 cents—and it's very poor quality. Michael's, an other craft chain store, will sell you enough to do 10 lbs. for 25 cents. And let me stress that our dye is so much it will color but from the way it looks and feels I know it costs 20 lbs. Even the local "head" shop dye is 39 cents for 12 lbs. worth of dye. And let me stress that our dye is of a much higher quality than any of the above. I've enclosed samples of our orange and lemon yellow—we have many other colors.

Scents run much the same:

Celebration!—1/2 oz. for 50 cents; 1 oz. for \$1

Poirette—1/2 oz. for 75 cents

Amer. Handicraft—1/2 oz. for 69 cents; 1 oz. for \$1.40

Again our scent is of a higher quality. Most craft companies dilute the scent before they sell it and this damages potency. Both American Handicraft and Poirette say their 1/2 oz. will scent 3-4 lbs. of wax—we usually figure our 1/2 oz. will scent 608 lbs. of wax.

Wick—we have an excellent source of wick. The most important part of a good burning candle is the wick—we have a fine metal core wick which we use in everything from 1/8" diameter candles up to our 7" diameter candles. In our 3" candle it consumes all the candle, in our 4" diameter and larger candles it burns a wick down for 11.00 lb. is compared to Amer. Handicraft—69 cents (for 4 oz) this wick will not float out of the candle. We sell for 1/2 oz. for 1 yard—Poirette is 15 cents a yard and Amer. Handicraft is even more—and of disgusting quality. We have other sizes also but this is the best.

We also have molds but currently I can't estimate those prices—but they will be good.

Because our prices are cut to the bone we will have to charge for postage—but Poirette and American Handicraft both do that even with their high prices.

Due to the fact that we are currently renovating one floor of a beautiful old building to move our shop into and because the dirty, old, big basement over at a new location for our "factory," plus we have back orders for wholesale candles—and on top of that I'm trying to finish up my undergraduate crap at Michigan State University, I have not gotten the catalog of our supplies together yet. This is why I am sending you the above information, and samples, instead of our catalog. I think from the information I've included you can see that we are trying to do a good thing. If you think we might fill the need for a candle making materials supplier in the Whole Earth Catalog it would be lovely to hear from you. You could run our name and address telling people to write to us for our catalog. If you could also ask people to send 25 cents to cover printing costs it would help us out a great deal.

Thank you for taking the time to read this. I hope it works out. Thank you also for taking the Whole Earth Catalog—you have really fulfilled a need. I'll miss you when you stop. I think your idea of "stopping" would be a good one for others to follow.

Peace,  
Bd Decker

Original Candle Supplies  
P.O. Box 29  
Pentwater, Michigan 49448

from:  
Charles E. Tuttle Company  
28 S. Main St.  
Rutland, Vermont 05701  
or WHOLE EARTH CATALOG



D.R. stepped out of the booth and handed the photo to Estelle.

"Hi baby," said the Flash. "How's your life?"

"Fucking miserable," said Estelle. "How's yours?"

"Better than yours, obviously. What's going on?"

"It's too long and too weird to tell," said Estelle. "What's happening in California?"

"Angel bought a farm in Oregon," said the Flash. "Two hundred acres. Her and Speed. They're into goats and bee hives."

"Far out," said Estelle. Suddenly she was smiling, and there was genuine cheer in her voice. "Far fucking out. They really did it."

"Two hundred acres," said the Flash. "I was up there the other day, it's really a neat scene. Was asking about you."

"Farside! Tell 'em hello, okay? Tell 'em I'll come see 'em."

"Will do," said the Flash. "Any other news, comments, hits, reports or flukes from the hinterlands?"

"It's grim," said Estelle. "No fluff said."

"Well," said the Flash. "Every cloud has a silver lining, and the darkest hour is just before dawn, and such like bullshit."

"You're stoned," said Estelle.

"Ah, yes, the blessed state. As a matter of fact, the old fire is waning a bit, I better go stoke it up a little. But listen you guys, call me again later? I'm interested in your fate."

"Burr," Estelle laughed. "We'll give you a weekly casualty report. Listen honey, it's nice to talk to you. Take care, okay?"

The Flash said he would take care. Estelle hung up then, and as soon as she did the smile vanished from her face. Without saying a word to each other, D.R. and Estelle went back to City Girl's apartment to get their stuff, and to tell everyone good-bye.



## Pioneer Pottery

Michael Cardew is a big gun, careful man, good potter, and the book is complete in a systems way. He starts in giving lessons in geology for potters, puts the reader's head down into the earth with the clay, and then runs through most of the materials tools techniques forms recipes and principles I've ever heard mentioned, an honest book, looks you right in the eye.

—jd

[suggested by Jeff Schlanger]

## Pioneer Pottery

Michael Cardew  
1969, 327pp.  
\$12.00 plus postage

from:  
Blackwells (see p. 2)

Practical potters have always had an instinctive knowledge of clay, and were able to make good pots with it although they (like the rest of the world) did not really know what it was. But during the past forty years a great deal of fundamental research on clays has been done, throwing a flood of new light on a field in which previously there had only been fogs, obscurity, guesswork—and mud. Pottery, it is true, cannot hope to be scientific, but unless we try to learn something about all this new knowledge, we shall remain for ever at the 'amateurish' level, with no real enlightenment on the ancient problems of why some clays are unpredictable and temperamental, while others are reliable and cooperative.

Let us begin with Geochemistry. The Earth, the warm-hearted fertile *Magna Mater* in whose bosom we all live, has been described by one geochemist as 'a projectile of nickel steel, with a sluggy crust.' The general picture of the earth presented by geochemistry is a slightly kinder one than this, since it provides a hydrosphere, an atmosphere and even a 'biosphere' to clothe the sluggy crust—the lithosphere—with decent verdure. It is estimated (1924) that the upper ten miles of the lithosphere or crust consist of:

95 per cent igneous rocks  
1 per cent shale  
0.75 per cent sandstones  
0.25 per cent limestones

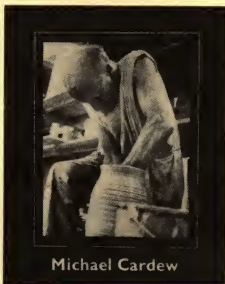
Figure 1.6. Paper wheel



## Free Fire Brick

I don't know anything about kilns except that fire brick is very expensive stuff. Noble Jasper Brenston solved this problem whilst reducing waste at the same time. He sought out and made friends with some engineers at a glass factory a few miles from his home. He was able to persuade the company officials to let him pout in their dump. Every few years, many glass companies must tear down a kiln because the intense heat is literally eating the bricks up. The old bricks are thrown on the dump, going to waste, but Jasper says they are still perfect for ceramics kilns. Like I say, I know nothing of kilns, but I've seen a kiln that Jasper built with old fire bricks, and it sure as hell looks like it works.

Bill Mariano  
Radnor, Pa.



Michael Cardew

Figure 10.4. Small wheel

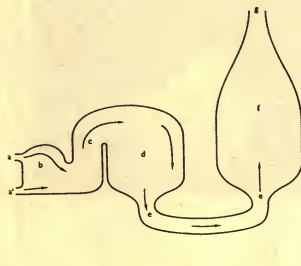
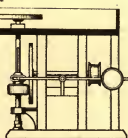
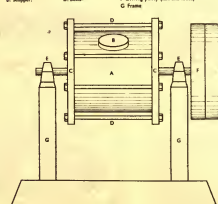


Figure 10.8. Two-chamber down-draught kiln (section)

Figure 10.9. Bell and cone kiln (section)

A. Bell B. Support C. Cone D. Base E. Flue F. G. H. I. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z. AA. AB. AC. AD. AE. AF. AG. AH. AI. AJ. AK. AL. AM. AN. AO. AP. AQ. AR. AS. AT. AU. AV. AW. AX. AY. AZ. BA. BB. BC. BD. BE. BF. BG. BH. BI. BJ. BK. BL. BM. BN. BO. BP. BQ. BR. BS. BT. BU. BV. BW. BX. BY. BZ. CA. CB. CC. CD. CE. CF. CG. CH. CI. CJ. CK. CL. CM. CN. CO. CP. CQ. CR. CS. CT. CU. CV. CW. CX. CY. CZ. DA. DB. DC. DD. DE. DF. DG. DH. DI. DJ. DK. DL. DM. DN. DO. DP. DQ. DR. DS. DT. DU. DV. DW. DX. DY. DZ. EA. EB. EC. ED. EE. EF. EG. EH. EI. EJ. EK. EL. EM. EN. EO. EP. EQ. ER. ES. ET. EU. EV. EW. EX. EY. EZ. FA. FB. FC. FD. FE. FF. FG. FH. FI. FJ. FK. FL. FM. FN. FO. FP. FQ. FR. FS. FT. FU. FV. FW. FX. FY. FZ. GA. GB. GC. GD. GE. GF. GG. GH. GI. GJ. GK. GL. GM. GN. GO. GP. GQ. GR. GS. GT. GU. GV. GW. GX. GY. GZ. HA. HB. HC. HD. HE. HF. HG. HH. HI. HJ. HK. HL. HM. HN. HO. HP. HQ. HR. HS. HT. HU. HV. HW. HX. HY. HZ. IA. IB. IC. ID. IE. IF. IG. IH. II. IJ. IK. IL. IM. IN. IO. IP. IQ. IR. IS. IT. IU. IV. IW. IX. IY. IZ. JA. JB. JC. JD. JE. JF. JG. JH. JI. JJ. JK. JL. JM. JN. JO. JP. JQ. JR. JS. JT. JU. JV. JW. JX. JY. JZ. KA. KB. KC. KD. KE. KF. KG. KH. KI. KJ. KL. KM. KN. KO. KP. KQ. KR. KS. KT. KU. KV. KW. KX. KY. KZ. LA. LB. LC. LD. LE. LF. LG. LH. LI. LJ. LK. LL. LM. LN. LO. LP. LQ. LR. LS. LT. LU. LV. LW. LX. LY. LZ. MA. MB. MC. MD. ME. MF. MG. MH. MI. MJ. MK. ML. MM. MN. MO. MP. MQ. MR. MS. MT. MU. MV. MW. MX. MY. MZ. NA. NB. NC. ND. NE. NF. NG. NH. NI. NJ. NK. NL. NM. NN. NO. NP. NQ. NR. NS. NT. NU. NV. NW. NX. NY. NZ. OA. OB. OC. OD. OE. OF. OG. OH. OI. OJ. OK. OL. OM. ON. OO. OP. OQ. OR. OS. OT. OU. OV. OW. OX. OY. OZ. PA. PB. PC. PD. PE. PF. PG. PH. PI. PJ. PK. PL. PM. PN. PO. PP. PQ. PR. PS. PT. PU. PV. PW. PX. PY. PZ. QA. QB. QC. QD. QE. QF. QG. QH. QI. QJ. QK. QL. QM. QN. QO. QP. QQ. QR. QS. QT. QU. QV. QW. QX. QY. QZ. RA. RB. RC. RD. RE. RF. RG. RH. RI. RJ. RK. RL. RM. RN. RO. RP. RQ. RR. RS. RT. RU. RV. RW. RX. RY. RZ. SA. SB. SC. SD. SE. SF. SG. SH. SI. SJ. SK. SL. SM. SN. SO. SP. SQ. SR. SS. ST. SU. SV. SW. SX. SY. SZ. TA. TB. TC. TD. TE. TF. TG. TH. TI. TJ. TK. TL. TM. TN. TO. TP. TQ. TR. TS. TT. TU. TV. TW. TX. TY. TZ. UA. UB. UC. UD. UE. UF. UG. UH. UI. UJ. UK. UL. UM. UN. UO. UP. UQ. UR. US. UT. UU. UV. UW. UX. UY. UZ. VA. VB. VC. VD. VE. VF. VG. VH. VI. VJ. VK. VL. VM. VN. VO. VP. VQ. VR. VS. VT. VU. VV. VW. VX. VY. VZ. WA. WB. WC. WD. WE. WF. WG. WH. WI. WJ. WK. WL. WM. WN. WO. WP. WQ. WR. WS. WT. WU. WV. WW. WX. WY. WZ. XA. XB. XC. XD. XE. XF. XG. XH. XI. XJ. XK. XL. XM. XN. XO. XP. XQ. XR. XS. XT. XU. XV. XW. XX. XY. XZ. YA. YB. YC. YD. YE. YF. YG. YH. YI. YJ. YK. YL. YM. YN. YO. YP. YQ. YR. YS. YT. YU. YV. YW. YX. YY. YZ. ZA. ZB. ZC. ZD. ZE. ZF. ZG. ZH. ZI. ZJ. ZK. ZL. ZM. ZN. ZO. ZP. ZQ. ZR. ZS. ZT. ZU. ZV. ZW. ZX. ZY. ZZ.



## A Potter's Book

we've carried this book as a little footnote to our pottery section, after talking with a few potters, and looking at the book a little, we've decided, I've decided, it has been decided, maybe it hasn't been decided, that this is the best all around pottery book. I can't pretty well cover the field, with good emphasis on Japanese techniques, particularly sound on glazes, simple diagrams, kiln plans, nice advice.

—jd

## A Potter's Book

BERNARD LEACH

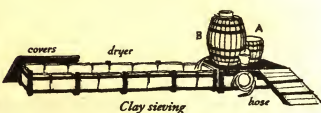
1967, 294pp.

A Potter's Book  
Bernard Leach  
1967, 294pp.  
\$8.75 postpaid

from:  
Transatlantic Arts  
Trade Department  
North Village Green  
Levittown, Long Island,  
New York 11756

or WHOLE EARTH CATALOG

\$3.60 from Blackwell's (see p. 2)



This book is the outcome of thirty-three years' experience of making pots by hand processes in the Far East and in England. During twelve of those years I had unique opportunities of gaining an insight into the spirit and methods by which early Oriental pottery was made. Here I have attempted to state these simply and openly, and to relate them to our Western need, primarily for the sake of other potters who suffer inevitably from the almost entire loss of our own brightness of traditional craft lore. But this book is also intended for students and teachers, for lovers of good pots and sound craftsmanship, and finally for those to whom the cultural meeting of East and West is the prelude to a human society. Out of my dual experience I have tried to formulate a criterion by which good pots may be recognized in a manner similar to that by which an ever-changing but nevertheless continuous classic standard encourages the appreciation of fine architecture, painting, writing and music.

Raku has two disadvantages which should be mentioned together with those qualities which obviously recommend it to the artist, the craftsman and the school; it is porous when new, and it is comparatively fragile. With use the pores of the body and the crackle of the glaze gradually fill up, so that even a raku vase will eventually cease to leave a damp mark behind it even on a polished surface. Its fragility, due to low temperature firing, necessitates the making of pieces with fairly thick walls, handles, and spouts. For this reason it is not advisable to make thin tableware of raku. A harder preliminary firing of the biscuit will strengthen the body, but at a sacrifice of the peculiar soft character of the glaze and its crackle. The Japanese do make pottery of this kind, using soft coloured glazes over stoneware biscuit, and call it 'Kochi' (Kochi Chinese ware), but it requires a kiln which will go to high temperatures.

## St. Ives Round Kiln

for biscuit, raku and slipware —

- ① Heat
- ② Ring bricks
- ③ Firebricks
- ④ Perforated cover

## FIRED

① Heat

② Ring bricks

③ Firebricks

④ Perforated cover

⑤ Heat

⑥ Ring bricks

⑦ Firebricks

⑧ Perforated cover

⑨ Heat

⑩ Ring bricks

⑪ Firebricks

⑫ Perforated cover

⑬ Heat

⑭ Ring bricks

⑮ Firebricks

⑯ Perforated cover

⑰ Heat

⑱ Ring bricks

⑲ Firebricks

⑳ Perforated cover

St. Ives round up-draught kiln

## Pottery

Authoritative and scrupulously organized with concise explanations accompanied by 388 lucid photos, Pottery presents an exceptional technique of throwing.

The rudiments seem preferable to those redundant techniques I learned. In addition are many finer techniques I never thought of.

Teach yourself to throw with this book or use it as I would to cleanse myself of bad habits. This is the only appealing pottery book I have ever seen, but it only covers throwing.

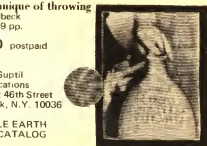
[Reviewed by Joe Banner]

Pottery  
the technique of throwing  
John Colke  
1969, 159 pp.

\$10.00 postpaid

from: Watson Guntill  
Publications  
165 West 40th Street  
New York, N. Y. 10036

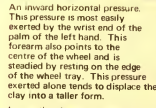
or WHOLE EARTH  
CATALOG



Two main pressures tend to centre the rotating mass of clay.



A downward vertical pressure. This pressure is most easily applied by the outside edge of the palm of the right hand. The forearm points to the centre of the wheel and is steadied by resting on the edge of the wheel tray. This pressure exerted alone tends to displace the clay into a wider form.



An inward horizontal pressure. This pressure is most easily exerted by the wrist end of the palm of the left hand. This forearm also points to the centre of the wheel and is steadied by resting on the edge of the wheel tray. This pressure exerted alone tends to displace the clay into a taller form.

In practice these two pressures are only rarely applied singly. Small and medium sized pieces can generally be centred by the simultaneous application of the two pressures.



The two pressures isolated in the two previous photographs are here shown combined. Every opportunity should be taken while centring of achieving additional steadiness through contact of the hands with each other.

There are other centring holds than the one illustrated. All involve an application of the same two pressures.



The clay is squeezed between the index finger and any one of the first three fingers of the right hand. This method is used much less frequently than the previous two but beginners do find it useful for gaining additional steadiness. Two variations are possible; if the pressure inside is applied by the ball of the index finger the main pressure can be applied by any one of the fingers and can be varied, the fingers not applying pressure outside can exert a slight steadying pressure to control the form either above or below the main point of pressure; or, if the side of the index finger is used inside pressure can be spread through all three fingers, the point of main pressure usually being in the lowest finger outside and the ball of the inside finger.

Throwing is the process of shaping an even mass of soft plastic clay by hand on a wheeled revolving at speeds varied by the thrower.

Turning is the process of paring away excess clay from a leather hard form.

Trimming with a needle or pin



The revolving wheel is gripped lightly between the fingers and thumb of the left hand. The right hand holding the needle is steadied on the left thumb.

The needle is pushed through until it touches the fingers of the left hand.



The left hand then grips the clay slightly more firmly and both hands rise forwards and upwards.



LEAVING ST. LOUIS

Gilded Lilly and the Crossstown Rivals had split while D.R. and Estelle were gone, and the others were asleep or half-asleep in odd places about the room. City Girl had gone into the bedroom by herself and closed the door. The only person who was on his feet was Reed, in the kitchen looking for stuff to make a sandwich out of.

"Get your money?" he asked. D.R. nodded. "I g-g-guess we'll t-t-take off now. Anybody want to go g-g-go to Cincinnati?"

"Somebody going to Cincinnati?" said a voice in the living room. It was Friendly Persuasion. She'd been asleep in the corner where Estelle had sat earlier. She was sitting up now, yawning and scratching herself through a hole in her sweater. "Somebody going to Cincinnati?"

"We are," said Estella. She was in the living room, looking around to see if they were forgetting anything.

"Far out," said Friendly Persuasion, and she leaned over and shook The Native, who was stretched out next to her. "Hey, Wake up. You want to go to Cincinnati?"

The Native opened his eyes long enough to say sure. Then he closed them again and turned over. Friendly Persuasion got to her feet and went to the kitchen where D.R. had joined Reed scrounging for food.

"Hey," said Friendly Persuasion. "No kidding? You got room? You got room for The Native too?"

"Sure. We g-g-got a b.b.b.us." Friendly Persuasion looked at Reed. "Do I want to go to Cincinnati?"

"Nah," said Reed. "You don't want to go to Cincinnati."

"But I do! I know a lot of people in Cincinnati."

"You don't want to see those people," said Reed.

"Don't? I? No shit?"

"Nah. Go on back over there and go to sleep." Reed had made a sandwich out of rice and some old chili. He took a bite, then held the sandwich out for Friendly Persuasion. She took a bite, and went back to the living room to talk it over with The Native.

"Hey, wake up," said Estella. "We got to decide."

"Decide what?" mumbled The Native.

"Are we going to Cincinnati or aren't we?"

"Sure," said The Native. "We're going to Cincinnati."

"I don't think I want to go," said Friendly Persuasion. And suddenly she knew for sure that she didn't. "Hey," she said to Estella. "Hey, hurray. Thanks, but we're not going, we changed our minds, okay?"

"Whatever's right," said Estella.

"Yeah. I was just there a month ago. Fuck it." And Friendly Persuasion lay down on the floor beside The Native and soon went back to sleep.

Estelle snipped the duflie bag shut and set it beside the door. D.R. and Reed came in from the kitchen, eating chili and rice sandwiches. D.R. handed one to Estelle, then picked up the duflie bag and threw it over his shoulder.

"Well, see you around," D.R. said to Reed.

"Goodbye," said Estella.

"Yeah, wow, man," said Reed. "Good to see you guys. Carry it on, okay?"

"We'll see you around," said D.R.

They left then. Reed closed the door behind them.

## Kilns

The definitive book on kiln construction and use. If you can build a pot you can build a kiln.

—SB



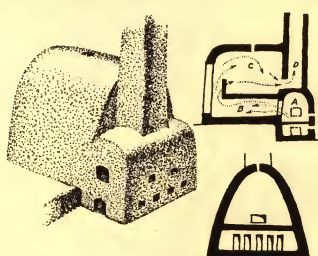
KILNS

Kilns  
Daniel Rhodes  
1969, 240 pp.

\$10.00 postpaid

from: Chilton Book Company  
401 Walnut Street  
Philadelphia, Pa. 19106

or WHOLE EARTH CATALOG



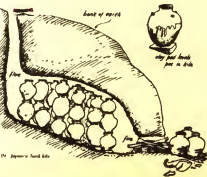
## Also of interest

Clay and Glazes for the Potter  
Daniel Rhodes. \$7.50 from Chilton  
Stoneware and Porcelain  
Daniel Rhodes. \$7.50 from Chilton  
Ceramics: Potter's Handbook  
Glenn Nelson. \$6.95 from:  
Holt, Rinehart & Winston  
383 Madison Avenue  
New York, N. Y. 10017

Design for a wood burning kiln with double crossdraft circulation. The bottom section is used for "bizen" effects where a lot of fluting is desired, while the upper section is relatively free of direct flame and fly ash, and can be used for regular glazed wares.

Refractory blocks, slabs, skewbacks, arches, or door blocks may be made on the job using castable materials. In fact, it is possible to make the whole kiln from a castable material. Refractory castable mixtures are made from a suitable aggregate, such as firebrick, grog, insulating firebrick granules, vermiculite, or perlite bonded with calcium aluminate cement. Calcium aluminate cement is similar to portland cement, and when mixed with water will set up in a hard, solid mass. But unlike portland cement, it is refractory and may be heated to red heat or higher without exploding or melting. Most brands of calcium aluminate cement may be used at temperatures in excess of 1300° C.

To cast a shape, a form must first be made. Forms may be made of wood or plywood, securely fastened at the corners, or in the case of curving forms, of bent plywood or masonite suitably reinforced. The forms may be given a light coat of grease to prevent sticking. The aggregate is prepared by crushing old firebrick or fragments of used insulating firebrick. The aggregate should be made up of particles of various sizes, from about 1/4 inch in diameter to grains as small as sand or silt. The proportion of very fine particles should not be too great, however. The aggregate is then mixed dry with 1/5 of its volume of cement. Water is added to mix, and the mass is mixed in a mortar box until it is of plastic consistency. It should be well moistened, but not so wet as to flow. The mixture is then shoveled into the mold and rammed into place as to leave no air pockets. The material will set in a few hours and may then be removed from the mold and cured in a cool place for several days. When thoroughly dry, cast shapes may be incorporated into the kiln structure.





## Potter's Wheels

An outstanding kickwheel, by all accounts.

**Klopfenstein**  
brochure  
free

from:  
H. B. Klopfenstein & Sons  
Route Two  
Crestline, Ohio 44827



price \$195 f.o.b. Crestline, Ohio 240 lbs.  
Reversible throwing head \$15  
Adjustable hip rest \$15

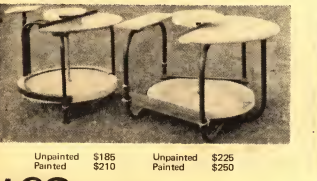
**Brent**  
brochure  
free

from:  
Robert Brent Potter's Wheels  
1101 Cedar Street  
Santa Monica, CA 90405



Prices	HP	Speed	
Model CX	1/2	0-220	\$350.00
Model C	1/2	0-220	\$275.00
Model C kit	1/2	0-220	\$245.00
Kick Wheel	1/4	175 max	\$110.00
Kick Wheel with motor inst.	1/4	175 max	\$175.00
Kick Wheel kit	1/4	175 max	\$39.50
Kick Wheel Motor kit	1/4	175 max	\$49.50

[Suggested by Mary Crawford]



Unpainted	\$186	Unpainted	\$225
Painted	\$210	Painted	\$250

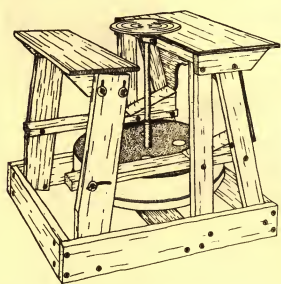
## Pacifica

i used the pacifica woodcrafts (lutweller) wheel, main goodie is the cast fiberglass flywheel that you can fill with about anything, pebbles, sand, water, to regulate the weight. empty it and it weighs about five pounds. whole wheel breaks down into components for easy transport.

-jd

Pacifica Woodcrafts  
P.O. Box 1438, Dept. W.  
Blaine, Washington 98230

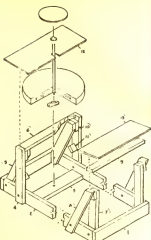
Kit (Metal parts and building plans)	\$ 45.00
Hobby Model (Plywood frame and fiberglass flywheel)	88.00
School Model (Metal frame, fiberglass flywheel)	168.00
Standard	138.00
Studio	148.00
Adjustable	169.00
Adjustable Studio	169.00



## Lipton Kickwheel Kit

\$40 for plans and mechanical parts.

Paul Lipton  
1624 Virginia St.  
Berkeley, CA 94703



**Extrin**  
brochure  
free

from:  
Extrin Mfg. Ltd.  
3651 Point Grey Road  
Vancouver 8, B. C.  
CANADA

Basic wheel with 1/4 hp motor	\$150
Less motor	109

## Jon Kaplan on Wheels and Kilns

At a potter, I thought I'd give you some thoughts about some materials, equipment, books, etc., which people might find useful. Potter's wheels: The kick wheel made by Pacifica Wood Crafts which you had in Spring 1970 is a fine piece of equipment. It's reasonably cheap, durable, and a good tool. I know people who have them and they have a lot of good things to say about them. The only bad thing though is the cost—the standard wheel is now above \$100 plus shipping. Check the latest issue (number 6) of the Mother Earth News for wheel plans which I developed along with a potter friend. Total cost—about \$65.

Extrin Wheels—a Canadian corporation which also has other potter's equipment. They offer four wheels of different flywheel weights, with or without motors, from \$109 to \$164 plus a \$6.00 crating charge on all motors.

Oak Hill Industries—1301 North Utah Street-Davenport Iowa 52804. They offer a standard kick wheel in a kit form. You can get fly wheel weights of 80, 110, and 140 pounds. It has a plywood frame with a cast aluminum wheel head. You can either buy it as a kit or preassembled. It seems like a good wheel.

Westwood Ceramic Supply—14400 Lomita Ave., City of Industry, California 91744. Has a dynamite electric wheel with an automatic feed back circuit which proportions out the amount of electricity relative to the force being generated by the potter on the clay. It's an electric wheel with gear reduction system. Seems like a fine tool. Unfortunately, their catalog doesn't have a price for the wheel.

Skutt Ceramic Products—2618 East Steele Street, Portland, Oregon 97202. They make one electric wheel for \$324.95 which is a pretty heavy price. I have used one and know other potters who have and it's really beautiful, except for the price.

Oscar Paul Corporation 522 West 182 Street, Gardena California 90247. They make three electric wheels which have different motors in them. Prices range from \$275 to \$350. Has a nice mechanical drive system.

Randall Pottery Inc. Box 774 Alfred New York 14802. They make perhaps one of the finest kick and motor driven wheels around today, except for the price. They have a standard kick wheel for \$270 which can be motorized for an additional \$155 so the grand total comes to \$425 for their motorized wheel. They also have a special wheel for \$565 with a bunch of accessories totaling about \$100 so there's a wheel going for \$665. I have used a Randall electric wheel for a long time previous to the one I built now and it's a really fine wheel, except for its price.

Kilns: If you're into gas kilns, build your own. Don't buy a gas kiln cause you'll be ripped off by its overcharging price. You can get 1000 K-23 insulating fire brick for about \$100, or less if you shop around for seconds. I got 1000 of these for half price. You can make your burners out of standard pipe fittings and use a vacuum cleaner for forced air. For burner plans, write to Alfred University, Alfred New York 14802 (Ceramic Dept) and ask for the schematic for the "Alfred Burner". You can get burners for a Xerox copy (probably). You can get burners from Pyronics Incorporated 17700 Miles Ave. Cleveland Ohio 44128. You can pretty much get a burner designed to your specifications cause they have a lot of designs. I bought two of their 100T torches with pilots, six sty switches, and some other garbage for a total of about \$160 which was the most expensive part of my kiln.

Books: The only trouble with Rhodes Kilns is that it leaves a lot out which you either have to find out for yourself or find out by trial and error. Other than that, it's quite good. Clay and Glazes for the Potter by Rhodes is a fine book, and that's about all you should really know. Nelson's Ceramics a Potter's Handbook is ok if you'd like a historical development of the art in hand with the technical.

Other duffies: If you're into building a kiln, write to the A.R. Green Company, 1018 East Broadway, St. Louis, Missouri 63265 and ask for their Pocket Refractories Catalog. Its free and has tabs, product information, details of construction, etc., all about refractories, and about 200 pages for free.

Peace

Jon Kaplan  
Cleveland, Ohio

**Soldner**  
brochure  
free

from:  
Soldner Pottery and Pottery Equipment  
Box 30  
Aspen, Colorado 81611



Unpainted	\$325	Unpainted	\$400
Painted	\$350	Painted	\$425

## Ceramic Supplies

most of this information was given to us by Bruce McDougall, who runs big creek pottery, davenport, california, 95017, his studio looks like a fine place to learn and work pottery.

-jd

You asked for some comments on pottery suppliers and gear. And I have some opinions, so here you are. . . The enclosed is a list of suppliers that I am more or less familiar with, some of whom I do business with regularly, others I just know about. There are many more good ones I am sure, and if I've missed any that's because I don't know about them.

-Bruce McDougall

### Westwood Ceramic Supply

14400 Lomita Avenue

City of Industry, CA 91744

Complete line of clay, glazes, glaze materials, chemicals, tools, wheels, kilns, etc. Good service & prices. Write for catalog (free)

### Western Ceramic Supply

1601 Howland Street

San Francisco, CA 94103

Complete line of materials, clay, wheels, etc. Prepared glazes. Excellent source for enamels at good prices. They have a good kick wheel. Write for catalog (free)

### W.E. Muehl Co.

725 Broadway

San Francisco, CA 94107

Kilns, repairs & service. Refractory materials & equipment.

### Ceramics & Crafts Supply Co.

490 5th Street

San Francisco, CA 94107

Clays & Glazes (westwood—at better small lot prices than you can get from L.A.) Materials of all kinds. Lookerbie wheels. Write for catalog (free)

### Leslie Ceramic Supply

1212 San Pablo

Berkeley, CA 94706

Clays, glazes, kilns, wheels, materials, molds, tools, An excellent all-around source in the east bay.

### Thorley Pottery Supply

1183 Industrial Avenue

South Gate, CA 90280

Kiln shelves, and I don't know what else. An excellent source for fired clay shelves in large sizes that will take come 10-11 reduction firings without trouble, at about 1/3 the cost of Silicon Carbide. Also excellent posts.

### Electro Refractories

18765 Fiberglass Road

Huntington Beach, CA 92647

Also excellent kiln shelves that will go to c/10-11 at a fraction of Silicon Carbide. Ask for Comp 104. They do not have the range of large sizes that Thorley has. Compare prices in your size.

### Pyro Engineering

200 South Palm

Alhambra, CA 91801

Thick slabs for floor plates, etc. (mine are 2" thick)—I don't know what else they have—I suspect shelves also, and etc?

### Denver Fire Clay Co.

3033 Blake Street

Denver, Colorado 80205

Complete line of kilns, wheels, glaze materials, etc. Excellent small power wheel. One of the original kiln builders. Bought out Dickenson years ago & now makes that kind also. Catalog (free)

### Castle Clay Products, Inc.

1055 South Fox Street, Unit No. 2

Denver, Colorado 80223

Catalog free.

### American Art Clay Co.

Indianapolis, Indiana 46200

An old company, making kilns, wheels, & selling all kinds of supplies. Oriented toward schools, their kilns are built massively & with all kinds of safety controls available to satisfy the most picky piece of marshmallow. More expensive than some. Write for catalog (free)

### The Craftool Co.

1 Industrial Road

Wood-Ridge, NJ 07075

Tools for ceramics & many other crafts. Catalog, \$1.00

### Kemper Mfg. Co.

P.O. Box 545

Chino, California 91710

Kemper specializes in making hand tools for the potter & sculptor. They do a good job, have a wide selection, and offer quantity discounts for direct sale. Write for catalog (free)

### Sculpture House

39 East 30th Street

New York, N.Y. 10016

Hand tools for sculptors & potters—a complete line. Catalog (free)

### A.D. Alpine Inc.

383 Coral Circle

El Segundo, CA 90245

Kilns, mainly—also wheels and other ceramic gear. Their kilns have for many years been the poor potter's friend, because they have sold so many that they are easier to find second hand than almost any other (at least in the west) They take a little experience to fire, but are excellent, reliable and long-lived. Catalog (free)

### Duncan Ceramic Supply

5649 East Street

Fresno, CA 93727

This is reported to be a remarkable place, well worth visiting if you are in Fresno. They have an excellent line of low fire glazes, and other supplies. I don't have their catalog, but they come highly recommended, and I think they probably have one. (free???)

### Jack D. Wolfe

Another ceramic supplier, lowest prices in New York area. They have a jet black clay.

[Suggested by Joan Newman]

### Jack D. Wolfe Co., Inc.

724 Meeker Ave.

Brooklyn 22, N.Y.



### 10 PIECE CERAMIC TOOL KIT

No. 96AZ—10 piece ceramic tool kit consisting of 5 double end wire tools; 4 plastic modeling tools; 1 steel scraper tool—\$4.95 edged in plastic pouch

Jack D. Wolfe



### CONE HOLDERS

Per Set of 4 pcs \$ 15

### DESCRIPTION

### Price Per Pound

1 lb. 5 lb. 10 lb. 25 lb.

Alumina Hydrate, Dense	.35	.28	.24	.20
Alumina Oxide, Calcined	.50	.35	.28	.25
Antimony Oxide	3.50	3.00	3.00	3.00
Arsenic, White	.75	.60	.55	.45
Barium Carbonate	.50	.35	.28	.24
Barium Sulphate	.50	.35	.28	.24
Bentonite	.35	.24	.21	.19
Bone Ash	.45	.35	.30	.25

Standard

**TOGGLE CUTTER** — Used to cut and slice lump clay or for cutting pots from wheel head. Two hard-wood handles with braided nylon cord for clean cutting.



Standard

\$ .35 each

## Jon Kaplan on Clays and More Kilns

### Clays:

The Fenton Foundry Supply Company  
134 Gilbert Avenue  
Dayton, Ohio

Has the cheapest prices on all bentonites, and super cheap prices on Redart Clay (\$2.50 cut) and Jordan Stoneware (\$3.50 cut). They are nice people to deal with. (free brochure)

### Cedar Heights Clay Company

50 Portsmouth Road

Oak Hill, Ohio

They mine and manufacture the Cedar Heights brands of clays, including Redart, Goldart, Fireclays, etc. If you pick up the clay at their place, prices are good—Goldart \$25.00 a ton, Redart, \$37.00 a ton. (free catalog and samples)

### George Fetter Ceramic Supply Company

1203 Seventeenth Ave.

Columbus, Ohio 43211

Fetter is a really fine person with really low prices. He used to have the lowest prices for clays and glaze materials last year, but they have gone up a few cents, but still are some of the cheapest I have found. He has a great selection of glaze materials, clays, some tools, and some other things like cones and Tyler screens. (free catalog)

### Standard Ceramic Supply Company

P.O. Box 4435

Pittsburgh, Pa. 15205

Standard is a huge operation and their prices are really good. They have perhaps the most complete line of clays and glazes, next to Fetter. They do a lot more business than George, mostly to Fetter, but a lot of my potter friends and I do some business with them. They carry a lot of tools, Randall wheels, Alpine Kilns, and a lot of good stuff. (free catalog)

### Rosin Ceramics Supplies

6912 Scheffer

Dearborn Michigan 48126

Rosin is a bunch of freaks with a lot of stuff, medium prices. Have cheap price Crusader electric kilns, and they are one of the few distributors of the Shimpo Wheel. They have a lot of stuff, and a free catalog.

### Other things:

Engineered Ceramics

Division of Sola Basic Industries

P.O. Box

Gilbert, Illinois 60136

They just had a run on kiln shelves, cone 15 and way above. They were seconds, at \$5.00 each and are outstanding. I bought a whole bunch. They make high temperature refractories, like saggers, setter tiles, etc. One of the nicest companies I have met with. Their shelves are far superior than silicon carbide, and new are pretty cheap. The seconds, if any are still left, are like new, with perhaps a little chip or an iron spot. (free brochure—Myco Alumina—ask for)

### Pyromix Incorporated

17700 Miles Avenue

Cleveland Ohio 44128

Manufacturer of combustion equipment for industry, kilns, etc. I have two of their burners on my kiln with blowers and safety valves, etc., cost me about \$1250.00 total. Put out a 200,000 BTU flame of 20 inches long. (Free catalog & book)

### Johnson Industrial Furnaces and Burners

Johnson Gas Appliances Company

Center Rapids, Iowa 52405

Some blower equipment. Don't know much about it. (Free catalog)

### Kilam Gas Burner Company

1240 South Hancock Street

Denver Colorado 80223

More burners, better than Johnson, more selection. (Free catalog, ask for drawing No. M-957-D, also P-12 and P-8 burner info.)

### Peace

Jon Kaplan

Cleveland, Ohio



## PART FOUR

### THE FIGHT

Driving through Vincennes that night D.R. and Estelle had their worst fight since they had been together. The immediate issue was whether or not they would spend the night in a motel in Vincennes. Estelle wanted to, was desperate to do it. But D.R. wanted to keep going. Once the quarrel over motels began, all of Estelle's latent frustrations and grievances toward D.R. surfaced and for about fifteen miles she shrieked and cried and cursed like a mad woman, and when D.R. just sat there not responding she became almost hysterical. At one point she started bawling on him yelling, "You clutz, you bastard, answer me!"

D.R.'s response was to turn the radio on and tune in an Indianapolis talk show. "I don't know, I just don't feel very balanced," a man was saying.

Estelle snapped the radio off. With a final "I hate you!" she crawled through the bus onto the mattress in back and covered her head with a sleeping bag.

Ceramic Supplies

Craft

163



All weaver's books and supplies edited with Sarah Kahn (and Carole Beadle advising).

## Craft & Hobby Book Service

Mail order only. **Craft & Hobby Book Service** offers a free, comprehensive and invaluable catalog of books for weavers and needle-workers. Only source for many of the titles listed. Books from all over the whole earth on hand-weaving, spinning, dyeing, loom-building, knitting, rugmaking, macramé, embroidery, tapestry, lace-making, knots & knitting, textile design. Newly revised & expanded catalog includes select titles in related fields: textile printing, batik, tie-dye, costume design, folk & primitive art & crafts, bead work, color theory. Each book is well reviewed / catalog is thoroughly indexed / service is prompt & personal / books may be returned if not found suitable.

—Sarah Kahn

Catalog  
\$0.50

from:  
Craft & Hobby Book Service  
Box 626  
Pacific Grove, CA 93950



## Sarah's Pick

*Byways in Handweaving*, Mary M. Atwater. 1954, 67. \$7.95  
**New Key to Weaving, Mary E. Black. \$12.  
*Creative Design in Wall Hangings*, Lili Blumenau. \$6.95  
*The Techniques of Rug Weaving*, Peter Collingwood. \$17.50  
*A Handweaver's Pattern Book*, M.P. Davison. \$8.75  
*Textiles of Ancient Peru and Their Techniques* \$25.00  
 (probably the most beautiful book ever made on weaving)  
*Warp and Weft from Tibet*, William A. King. \$3.50  
*Navajo Shepherd and Weaver*, Gladys A. Reichard. \$8.00 (1936, 68)  
*Spider Woman*, Gladys A. Reichard. \$8.00 (1934, 68)  
*Weaving is for Anyone*, Jean Wilson. \$8.50  
*Shuttle Craft Guild Monographs* by Harriet Tidball. (Craft & Hobby can furnish list)  
*The Textile Arts*, Vera Birrell. \$12.95  
*Your Handspinning*, Elsie Dunsenport. \$3.95  
*Dye Plants & Dyeing—A Handbook*, Brooklyn Botanic Gardens. \$1.65  
*Hopi Dyes*, Mary-Russell F. Cotton. \$2.50  
*The Dye Pot*, Mary F. Davidson. \$2.00  
*Crowd Embroidery*, Erica Wilson. \$7.50**

All available from Craft & Hobby

\$6.00 /yr (quarterly)

from:  
Handweaver & Craftsman Inc.  
220 5th Ave  
New York, N.Y. 10001

## Card Weaving Cards

\$2.95 /100 cards

from:  
Lily Mills Co.  
Shelby, N. C. 28150

or WHOLE EARTH CATALOG

## Byways in Handweaving

The book is concerned with rare weaving techniques and patterns from ancient Egypt & Peru, modern Guatemala, Scandinavia, the South Pacific, Atlas Mountains and various American Indian tribes. Most of the weaves are for narrow bands but many may be adapted for wider fabrics.

There has been a great resurgence of interest in both card and inkle-weaving since this book was first published in 1954. Both sections include clear text, many pattern diagrams & fine color illustrations of finished pieces. The rest of the book is concerned with a number of other little-known techniques; "primitive" only in the aspect of being non-loom, or requiring only the simplest of materials. There are examples of twined weaving as practiced in many parts of the world as remote from one another as Persia, the Subarctic & the South Seas. A fascinating chapter on braiding & knotting includes a group of Indian, Egyptian, Chinese & Peruvian braids, belt-braiding, Osage braiding. Another section deals with some very subtle and beautiful belt weaves of Peru, Estonia & Guatemala.

Included in the book are techniques ranging from those simple enough for a child or for use in occupational therapy to some rather difficult & intricate methods which should be quite stimulating to experienced weavers.

—Sarah Kahn

## Byways in Handweaving

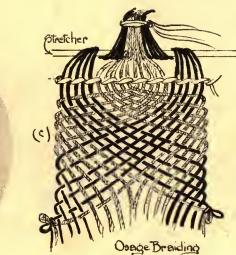
Mary Klein Atwater  
1954, 1967; 128 pp.

\$7.95 postpaid

from:  
The Macmillan Company  
Front and Brown Streets  
Riverside, Burlington County, N.J. 08075

or Craft & Hobby Book Service (see p. 51)

or WHOLE EARTH CATALOG



## Handweaver and Craftsman

the lapidary journal of weaverdom  
 lotts different yarn companies and loommakers advertise in this quarterly, piles of books are mentioned, downhome articles by people doing weaving emphasis on natural things, fine forum.

—jd

[Suggested by Sandra Koehlin]

## Handweaver & Craftsman



## Handweaver and Craftsman

Mary Alice Smith, editor

\$6.00 per year (quarterly)

\$1.75 single copies

from:  
Handweaver and Craftsman Inc.  
220 5th Ave.  
New York, N.Y. 10001

**FREE 48-PAGE CATALOG** of Books on Weaving, Spinning, Dyeing, and other crafts. You will enjoy browsing through it. The Unicorn, Books for Craftsmen, Box 645R, Rockville, Maryland 20851.

## Weaving is for Anyone

Rich & inspiring, the theme & theory of this book is that anyone can weave on almost anything. Included in one volume are instructions for making simple and inexpensive looms and a variety of techniques for weaving on these looms. There are directions for looms made of cardboard, picture frames, boards & nails; boxes; there are round looms, bag & backpack looms. There is a discussion of Peruvian, Chilkat, Salish, Navajo, Ghanaian & Coptic weaving & beautiful illustrations of these techniques and the looms on which they are woven. There are illustrated definitions of weaving terms. A chapter entitled "Weaving from Nature" suggests that a walk in the garden or woods can yield some fine weft material. Over 230 drawings & photos. A good general sourcebook, full of both turn-on and good practical information.

—Sarah Kahn

[Suggested by Ann Marie Goldstein]



Weaving is for Anyone  
Jean Wilson  
1967; 144 pp.

\$8.95 postpaid

from:  
Van Nostrand-Reinhold Co.  
460 West 33rd Street  
New York, N. Y. 10001

or WHOLE EARTH CATALOG



## New Key to Weaving

A one-book weaver's library. A comprehensive textbook covering all aspects of loom weaving. Incredibly packed. Section on tapestry weaving alone is worth the cost of the book.

—Sarah Kahn

[Suggested by Victoria Becker]

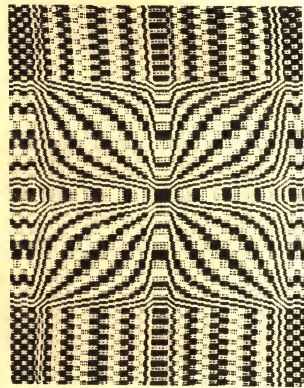
## New Key to Weaving

Mary Black

1940, 1949, 1967; 573 pp.

\$12.00 postpaid

from:  
The Bruce Publishing Co.  
c/o Macmillan  
866 Third Ave.  
New York, N.Y. 10022  
or WHOLE EARTH CATALOG



## The Techniques of Rug Weaving

Here at last and it's ALL here! Like some fantastic teacher—gives you just what you need to know—being thorough, comprehensive, scholarly, inspiring (I'M GOING TO WEAVE A RUG!) Over 400 lucid diagrams, 174 illustrations, only 4 in color but how much can one ask? Detailed coverage of every aspect of rug weaving from fundamentals to most advanced & formerly obscure techniques; from ancient methods to Collingwood's own inventive technical developments. As further application beyond rugs can be made of most of the weaves, this is a book for all weavers. Formidable!

—Sarah Kahn

## The Techniques of Rug Weaving

Peter Collingwood  
1968; 480 pp.

**\$17.50** postpaid

from  
Watson-Guptill Publications  
165 West 46th St.  
New York, N.Y. 10036  
or WHOLE EARTH CATALOG

## PETER COLLINGWOOD The Techniques of Rug Weaving

## The Mannings

Good variety of rug materials (sturdy Swedish backing, various yarns, etc.), also weaving and macramé equipment and materials.

—SB

## Catalog

**\$0.50**

from:  
The Mannings  
RD 2  
East Berlin, Pa. 17316

## Make Your Own Rug

You can weave a tough rug (see Peter Collingwood), or you can knit a tickly deep one. This simple book has basic Smyrna, Finnen, Rya techniques of rug knotting.

—SB

Make Your Own Rug  
Dietrich Kirsch, Jutta Kirsch-Korn  
1969; 56 pp.

## OUT OF PRINT

Watson-Guptill Publications, Inc.  
165 W. 46th St.  
New York, N.Y. 10036

## Simple Smyrna Knot

For this time-saving knot you will need cut lengths of yarn 2-1/2 to 2-3/4 inches long. Lay the ends of one exactly together with finger and thumb and pull the loop over the latch hook. (1) Then push the hook upwards under two cross-threads of the canvas (2). Lay the ends of the yarn over the latch into the hook and pull the hook downwards, which will make the eye close (3). When the ends of the yarn have been pulled right through the loop the knot is completed. Tighten it by pulling the ends of the yarn (4). The photograph shows a row of this simple Smyrna knot. To make a square yard of rug reckon 40 to 45 knots of yarn. Drierh can be suitable for Smyrna technique.

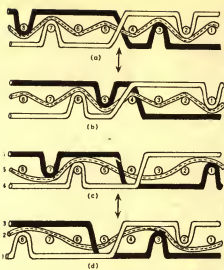


Fig. 201  
Back Weaves based on  
Three-Wall Double-Tend  
(a) and (b) Cross sections of  
plain weave. (c) and (d)  
Cross sections of plain weave  
of plain weave. (e) and (f)  
Cross sections of plain weave  
of plain weave.

Fig. 101  
Knot Weaving  
and with the  
double row



## Speed Tufting Tool



## Dearest Earth,

I realize it ain't polite to turn someone on to a hooker—but I felt it my duty to do so.

You may have already heard of this device—but just in case ya ain't I bought a rug hooker which finishes off a 2' x 3' carpet in about 4 hours in your own design, and in different lengths. And for all those capitalists, a 2' x 3' rug can be made for under \$5 & I've sold 'em for as much as \$30! So.

The dojahber is a mere \$14.95! can you dig it? I didn't think so.

Here's where you pick one up

The Rug Crafters  
1210 East Edinger  
Bldg. I  
Santa Ana, CA 92705

Dan Chapman  
Sun Valley, Calif. 91352



## The Ruggery

Good assortment of backings, yarns, dyes, frames, hookers, slitters, and advice.

—SB

(Suggested by Bora Roka Jackson)

George Wells

The Ruggery  
Glan Head, L.I., N.Y. 11545

## Speed Hookers

All Speed Hookers work from the back. This reverses your design in the finished rug. Backing must be stretched on a frame for all speed hookers

Columbia Minerva Punch Needle, Postpaid \$2.75

We use this Punch Needle with yarn only, but it is sometimes used with cloth strips. It is the most practical and versatile punch needle we know. Most of the rugs made at the Ruggery are made with this Punch Needle. Comes with 2 size points. Adjusts to give 10 different length loops from 3/8" to 7/8". Good for quiet sitdown work.

Instructions for making rug or wall hangings with a Columbia Minerva Punch Needle. A booklet by George Wells, \$1.00

Covers everything from threading the needle and spacing of stitches to backdrops and finishing. With these instructions and no lessons you can make good rug. Punch needles have proved to be the most popular method for "hooking" with yarn.

Susan Burr Shuttle Hooker, postpaid \$3.50.

Wooden handles—shaped like a guitar. Works better with "rag" than it does with yarn. It is not adjustable for height of loop. Rag loops approximately 3/8", yarn hooks slightly shorter.



CINCINNATI

At the edge of Cincinnati D.R. pulled into a Gulf station and parked around the side by the tire rack. Since their argument the night before, and the cryptic statement over the radio by the guy who didn't feel very balanced, D.R. had been into balance as a concept. About to enter Cincinnati, he wanted to stop at the station and spend some money so his wealth would align with the inner grammatical logic of the city he was coming to. D.R. had been in Cincinnati, and in the smaller towns north toward Dayton—Middletown, Hamilton, Franklin, Miamisburg—thru ten years of his life, and yet this was the first time he had ever really flashed on the word Cincinnati. There he was, driving along, considering the concept of balance while Estelle slugs furiously in the back, when suddenly the word "Cincinnati" popped up on a highway sign. Fantastic, D.R. thought.

Cin  
Cin  
Net  
I.  
How balanced, how smooth the word Cincinnati. Both in form and content. Content equals sin two times, add one ratty. Natty sin. Four vowels in Cincinnati, three it's pierced by a single a.

Cin  
Cin  
Cin  
Cin  
Net  
I.  
Four syllables. Four vowels and four syllables, ten letters in the word all together. Four and four are eight, plus ten is eighteen. I've got eighteen dollars and eighty cents, an imbalance of eighty which it won't take me a jiffy to rectify if this old boy will wait on me.

"Excuse me," said D.R. "How much are those fuses there?" He was looking at a sign above a box of fuses that said, "Why be helpless when fuses blow? A few cents spent for a box of fuses will save you possible delay or danger later on."

"Do which?" said the attendant in a high, nasal, hillbilly whine. He was busy making coffee on a hotplate over the roadmaps.

"Those fuses. How much are they?"  
"Twenty cents apiece," said the attendant.

"Good," said D.R. "I'll take four."

The attendant picked out four fuses and stepped with them to the cash register, yawning as he rang them up. It was about five in the morning, barely sunrise. It was hard to tell if this was an all-night station or the start of a brand new business day.

As the attendant pocketed the various coins, D.R. felt a deep sense of well-being glowing inside him. Eighty cents from eighteen eighty left eighteen exactly. How perfect, how balanced, how lovely the word eighty. Ex. Act. After the act. It reminded D.R. of the (C)ing heagram called After Completion, the one about the importance of tuning the flame beneath the kettle exactly right, so that it burns with a precise intensity. Precision, D.R. thought. Precision and intensity. Those are the keys.

"That'll be eighty-three cents," said the attendant, yawning again.

D.R. looked at him. "How much?"  
"Eighty-three cents."  
"Why the three cents?" D.R. asked, and when the attendant said sales tax D.R. thought: fucked in the ass by a tax.

D.R. was not enlightened by any of this experience, but it edged him a little further along the way.



## Your Handspinning

### THE book on handspinning.

The book commences with a discussion of wool & sheep, then comes chapters devoted to sorting a fleece, learning to make a continuous yarn & the art of carding & spinning wool. There is an excellent section on the construction, use & maintenance of spinning wheels & hints on buying a wheel. There is information on the cultivation & preparation of flax, and the spinning of fibres such as silk, angora rabbit, camel & other animal hairs. There is a chapter on plying & the making of fancy yarns and a section devoted to the preparation of spun yarns for use—washing, bleaching, etc. The book concludes with a chapter on mashing, fine spun yarns: counts/qualities & defects/fiber identification. Illustrated with many line drawings.

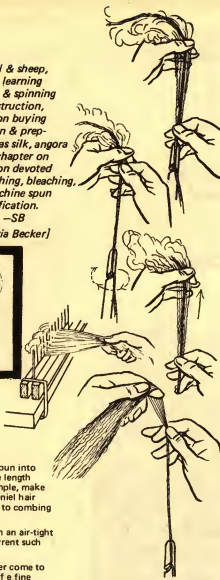
—SB  
[Suggested by Victoria Becker]

**Your Handspinning**  
Elise Davenson  
1983, 1984, 130 pp.

\$3.95 postpaid

from:  
P.O. & Hobby Book Service  
P.O. Box 626  
Pacific Grove, CA 93950

or WHOLE EARTH CATALOG



### Dog Combs, etc.

Many dogs yield combs or clippings which can be spun into useful yarns by whichever method is best suited to the length and character of the fibres. Poodle clippings, for example, make a very pleasant "woollen" yarn while the lustre of Spaniel hair needs a westered spin. The addition of a little oil prior to combing or carding may make spinning easier.

Combs or clippings should be stored until wanted in an air-tight container in a cool place, preferably with a moth deterrent such as paradichlorobenzene.

No instance of the use of cat's hair for spinning has ever come to light but it would be quite possible to spin combs of a fine haired Persian, especially carded with suitable wool. The author's experiments with a mixture of Siamese and camel are not to be recommended.

### The Indian Spinner

If you are looking for an interesting new type of spinning wheel which is relatively inexpensive compared to the standard antique or new wheels, consider an "Indian Spinner". They are much easier to learn to spin on, especially if you can spin yarns with a spindle. The nicest feature is the ability to handle very thick yarns as well as the thin threads you get with a standard wheel. Its design is simple and functional, being similar (if you are familiar with the parts of a spinning wheel) to that of an enlarged "mother-of-all" of the standard wheel. The Robbin holds a great amount of yarn. The spinner head can be attached to an old type treadle sewing machine or purchased with a wood treadle to match the spinner. The Spinner Head alone costs about \$25, with a treadle base \$43.50. These prices are for the plywood spinners; they also come in fancier woods at fancier prices. They are available through the Handcraft House, 1942 Marine Drive, North Vancouver, B.C., Canada. They publish a small catalogue for \$50.

[Suggested and reviewed by Carole Beadle]



The first fibers of the fiber supply caught to the yarn.

### Ashford Spinning Wheel Kit

I thought I tell you something about the Ashford Spinning Wheel Kit. I am a "spinner" from way back and this wheel—it took about 6 months to get here—is just great, well balanced. It is easy to put together and finish. Even the inexperienced spinner will have few problems with it. I am tipping off the skeins like nothing even to real fine weaving threads.

By the way it is quite worthwhile to wait for the items from New Zealand. The price alone Spinning Wheel \$31.—as compared to old or new ones here now under a \$100.—. Quality wool 10 lbs \$7.00 delivered to you as compared to making a long trip somewhere and picking up much inferior wool which is a pain to card, wash & spin for the same price or more.

[Reviewed by Ursula Schramm]

Ashford Handcrafts Ltd.  
P.O. Box 12 - Rakau  
Canterbury, New Zealand.

Note: The Ashford prices are higher now, but they hope to stabilize them.

—SB



## Handspinning

### Another THE book on handspinning.

A dense well-done technical up-to-date treatment of the subject. Customize your yarn with nubs, slubs, partially blended colors, heart. If you recall, this was Ghandi's approach to revolution.

—SB

### Handspinning—Art and Technique

Allen Fannin  
1970, 206 pp.

\$12.50 postpaid

from:  
Van Nostrand-Reinhold Books  
450 W. 33rd St.  
New York, N.Y. 10001

or WHOLE EARTH CATALOG

Garnetting. The use of previously spun yarns, which have been broken up or garnetted, as it is called, is another way to design yarns with texture. This method is generally not employed by hand spinners, though it no doubt should be. The system of using fiber that has been reprocessed or garnetted from spun yarns, and then respun is primarily used in a mill situation for producing lower-quality goods. However, as a design device, there is much potential for the handspinner.



The flyer wheel. (A) stock (B) legs (C) treadle (D) pitman (E) drive wheel (F) drive wheel posts (G) drive band (H) flyer assembly (I) tension adjustment

### Made-Well Spinning Wheel

This company is run, I am told, by an Indian tribe. It is located in a very small town in Canada. The company doesn't have a phone; I tried to call once. They make excellent quality products.

Spinning Wheel ea \$45.

Cardsea. \$6.

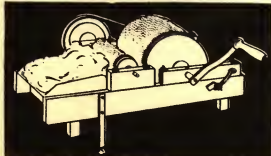
Carding machine (crank model) ea \$25.

These are approximate Canadian prices. They are subject to change periodically. There is also duty when having them sent into the U.S., but I consider the wheels and cards of better quality than any I have seen and worked with. The prices (even with duty) are less than wheels manufactured in the U.S. They have no outlets the wheels must be ordered direct.

[Reviewed by Diane Senders.  
Suggested by Bruce Adams]

Made-Well Manufacturing Company  
Sifton, Manitoba  
Canada

For low prices, high quality spinning wheels, also check Swedish suppliers, p. 169.



## Vegetable Dyeing

It has 144 pages 6 x 9 & 4 pages of color charts, a bibliography, a very handy reference chart and index. What is like about it is that it is listed by colors, gives more information on the process of dyeing, when to gather, how to gather, store and make fast vegetable dyes than any other book I've seen including the Botanical Garden's book, and the reference chart is very handy—

[Reviewed by Anne Popperwell]

## Vegetable Dyeing

Alma Lasch  
1971: 144 pp.  
\$7.95 postpaid  
from:  
Watson-Guptill Publications, Inc.  
165 W. 46th St.  
New York, N.Y. 10036

or WHOLE EARTH CATALOG



DYE SUBSTANCE	APPROPRIATE MORDANT	COLOR RANGE	SUITABLE FIBER	COLOR FASTNESS
Acorns	Alum	Tans	Wool, silk	Excellent
Alkanet roots	No mordant	Gray-blues	Wool	Good
	Acetic acid	Red-purple-browns	All natural fibers	Good
	Alum	Red-tans	All natural fibers	Good to fair
Annatto	Alum	Orange	Wool, silk	Fair
Annatto and red onion skins	Tin	Dark yellows	Wool, silk	Good to fair
Berberis plant	Alum	Tans	All natural fibers	Excellent
	Blue vitriol	Greens	All natural fibers	Excellent
	Coppers	Dark greens	Wool	Excellent
	Coppers	Blacks and grays	Jute	Excellent

Blackberries with tin mordant on cotton

Cochineal with chrome mordant on wool

Elderberries with alum mordant on wool

Logwood with alum mordant on wool



Fruits of the native elderberry (*Sambucus nigra*) will give black blue with an alum mordant, violet purple with chrome. The leaves alone give various tones of yellow, according to the mordant.

## Dye Plants and Dyeing

This book I consider about the best that is available on its subject and would make an excellent basic handbook for the beginner. It contains historical information as well as the basic steps to dyeing, recipes, and articles about dye plants from various regions and countries. So, no matter what part of the country you live in, you will find a variety of plants and recipes which you would be able to use. There is enough information in this book which should enable you to start your own dyeing and end up with satisfactory results... which is not true of all natural dye books. The one difficulty in using it, however, is that there is no index.

[Reviewed by Carole Beadle]

## Dye Plants and Dyeing

100 pp.

\$1.25 postpaid

from:  
Brooklyn Botanic Garden  
Brooklyn, N.Y. 11225

or WHOLE EARTH CATALOG

How to prepare the dye solution by chopping, then soaking and boiling the plant parts, and straining them out before adding their color to the dye bath, is told on pages 13 and 14. Briefly, here are the basic directions for the actual dyeing of wool:

Have wool clean and moist.

For each pound, use 4 to 4½ gallons of dye bath.

Enter wool when dye bath is lukewarm.

Heat slowly to simmering point and let simmer half an hour (longer if required), moving wool gently back and forth.

If dye bath gets low, lift wool, add hot water, mix in well, and return wool to pot.

Rinse dyed wool first in nearly boiling water, then in several waters of gradually lower temperatures.

When rinsing water is clear, squeeze moisture out of wool and dry in shade.

## Dyes

The best are Ciba Dyes (*Cibalan* for wool, *Chloraniline* for rayon, cotton, linen). Some suppliers in eastern U.S. carry these. Putnam and Cushing are good also.

For natural dyes, the finest supplier is:

Comak Chemicals Ltd.  
Swinton Works  
Moon St.  
London N1  
England

[Suggested by Carole Beadle]

and the next best on natural dyes:

C. D. Fitz Harding-Bailey

15 Dutton St.  
Bankstown, NSW 2200  
Australia

[Suggested by Memory Holloway]

FH-3 also carries wool, mohair, and weaving and spinning equipment. "No importation formalities."

## Natural (Organic) Dyes

	Packs
Natural Indigo	\$ .75 oz. 2 ozs.
Fine Ruby Cochineal (rare)	1.05 oz. 2 ozs.
Carmine Cochineal	.85 oz. 2 ozs.
Madder	.70 oz. 2 ozs.
Weld	.50 oz. 2 ozs.
Victorian Walnut	.50 oz. 2 ozs.
Quercitron	.50 oz. 2 ozs.
Logwood	.50 oz. 2 ozs.
Red sandalwood	.50 oz. 2 ozs.

Pracel (pronounced with a 'sh') dyes, with us only since 1956, are popular with some for being bright, simple, and fast. The manufacturer/dealer in New York has inspired complaints by short-changing on weight.

Pylam Products Co., Inc.  
95-10 218th St.  
Queens Village, N.Y. 11429

—SB

## Fezandie and Sperrie

colors,  
aniline colors,  
artists colors,  
batik colors,  
cement, even concrete colors.  
tie dye your sidewalks.

—JD

[Suggested by Janet Sherman]

## Catalog

free

from:  
Fezandie and Sperrie, Inc.  
103 Lafayette Street  
New York, N.Y. 10013

## Try Tintex

Larry Koenigsberg's letter on pg. 7 of the January Supplement concerning Rit dyes are my sentiments exactly. A while back I dyed a T-shirt in Rit dyes. The colours were O.K. till I washed it and woe did it ever fade. I've found Tintex dyes are more reliable — they hold their colour when washed and are brighter to begin with. They work great on cottons (even if it's stay press material), silks and linens. Tintex dyes are quite a bit cheaper than the Procion dyes. Larry suggested (\$54 for a 2-1/2 lb. or box), and due to the fact dyeing him becomes so popular they now come in a wide variety of brilliant colours (now one doesn't have to mix colours as one had to produce brighter colours). This saves time and money as well.

There are some of the new colours that I've found are exceedingly good:

Butterscotch  
Tiger Lily — a brilliant orange  
Crimson Red  
Plum — a beautiful purple

If you don't want your colours to run or fade when you wash them put them in vinegar or very salty water before you wash them. I've found it helps a great deal.

Marc Silberman  
Indianapolis, Indiana

## Domination Herb Distributors

natural dyes  
a complete selection,  
had trouble finding annatto seeds?

—JD

[Suggested by Michael Wells]

## Catalog

free

from:  
Domination Herb Distributors, Inc.  
61 St. Catherine Street West  
Montreal 18, Quebec, Canada

For Dyeing Fabrics  
5 lbs.

Indigo roots	1 lb.	1 lb.
Indigo roots	2.00	2.15
Cochineal	2.40	2.55
Alkanet roots	6.50	6.65
Logwood chips	2.20	2.35
Cudbear	1.25	1.40
Quercitron bark ( oak)	6.50	6.65
Black walnut hulls	1.25	1.40
Black walnut leaves	1.25	1.40
Red sandalwood chips	1.80	1.95
Henna leaves	1.40	1.55



## THE COACH'S PANTS

D.R. didn't feel like going out to his sister's place till things got a little more balanced, so they drove into downtown Cincinnati and parked around the corner from the Greyhound bus station. They figured that would be a change of pace to sit, and besides that, D.R. wanted to change clothes and wash up some. He didn't want to disfigure himself in cleanliness for his sister's sake, and her family's, but he didn't want to stare anybody there. He looked pretty freaky for Cincinnati. He and Estelle had been drawing staves since the streets began to fill with people going to work. What D.R. really wanted was for his appearance to not be a factor one way or another. That wasn't very likely, considering his hair, but maybe a change into more or less straight clothes would at least keep the whole how-you-look thing at some low plane out of everybody's way. If that could happen he figured he stood a good chance of bringing this day into balance after all.

D.R. fished around in his duffel bag for the shirt and pants he'd bought at the Goodwill in California. The shirt was gray with little blue pin-stripes up and down it. It had wide, french cuffs and a button-down collar, although when he put it on he didn't button it down because the button on the left side was gone. The pants were brown, frayed at the pockets and shiny at the ass and knees. They'd probably been part of a suit worn by the manager of a discount store, or perhaps by a small town high school coach about to leave athletics and go into administration. Probably he coached about four sports. Leaving it to go into administration would mean going back to college, of course, and finishing up the old M.A. Probably he would do it in the summer terms. Ten or twelve summer terms, ten or twelve more football, basketball, baseball and track seasons and he'd be all set. Maybe he would even get a new suit somewhere along the way and build his wardrobe again, after the loss of his brown pants.

Suddenly it occurred to D.R. that the reason the pants had gotten into the Goodwill on sale for twenty cents was that the coach had died. A heart attack, maybe, most likely, because D.R. didn't like to think about the coach being dead. The thought of him being dead put things out of balance again. To keep from thinking about the coach D.R. read the graffiti on the walls of the toilet stall as he rolled his old dirty clothes up in a wad. Suck on this one, *Hard Hat America*, someone had written in ink. I'm over thirty, college educated, liberal, have long hair, and make \$45,000 a year.

Next to it someone had replied, in crayon: *When they even't suckin' a big dick, all Long Hairs are skin divers for Roto-Rooter.* Above the toilet paper container someone had scratched with a knife: *If you've got it all together, what's that all around it?* And then as D.R. was leaving the stall he read on the door: *There are times when the waves are silent and the moon is howling. That one sort of get him. He stood up, getting in a long time, wondering if it would make things more balanced or less for him to write something on the wall. Finally he took a stub of pencil out of his pocket and wrote: I am a balance freak in a dead toilet coach's pants.*





## Looms

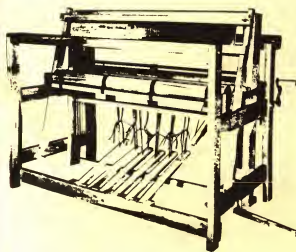
OK, serious looms. The best is Gilmore, but you'll have to wait 6 months until they catch up with your order. Next best is Macomber. Then Lorellyn. Also check out Harris, Newcomb. If you're discriminating and patient and want a buy, you'll write to Sweden.

—SB

## Gilmore Looms

... Lastly, you are advertising LeClere Looms, which are not the best, merely the most advertised. I am an experienced weaver and have woven on most brands. I heartily recommend GILMORE for anyone who is actually interested in weaving, rather than just playing like. They are less expensive, better made, and much more efficient both for set-up and during weaving. The harness frames fit right out for quick heddle changes between weaving projects, a unique warp advance system is used, the rising shed is sure and versatile, workmanship is unsurpassed. When speed is important these features are vitally important. I have an 8-harness 46" very heavy rigid Gilmore (\$150) for compact \$1315. LeClere's comparable model Niles 8-harness 45" is \$457 (1) and inferior. Gook on that and send for a brochure: Mr. E. E. Gilmore, Gilmore Looms, 1012 North Broadway, Stockton, California 95205.

Tracy,  
Don & Mihal Deese  
Vancouver, B.C.



## Gilmore

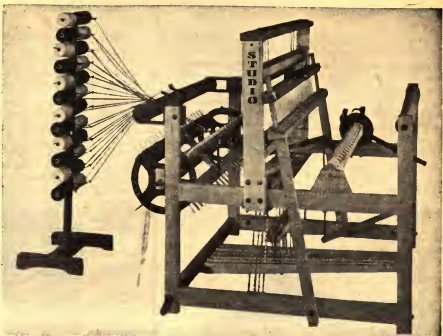
40" 4-harness compact rigid loom, \$235.00.

E. E. Gilmore  
1032 North Broadway  
Stockton, CA 95205

## Newcomb

45" 4-harness, \$185.  
Newcomb Loom Co.  
Davenport, Iowa 52808

(Suggested by Mrs. Terrie A. Schaffner)



## Harris Loom

I was dismayed to read in your March supplement about the unhappy experience of Karl Smiley in his search for a loom; and I thought some information about a loom designed and made in Vancouver might be of help to him and some of your other readers. The maker of the loom is H.C. Harris, of North Vancouver, B.C., Canada, and the looms can be ordered from Handcraft House, 110 West Esplanade, North Vancouver. The table model, 22 inch, 4 harness, sells for \$55.00; and a treadle version of the same loom costs \$85.00. Anyone living out of Vancouver would have to add shipping costs which I have been advised would not exceed \$10.00, and persons living in the U.S.A. would have to find out about customs, but even with these added costs the loom is a bargain, sturdy, attractive and well designed.

Joan Mallinson  
West Vancouver, B.C.

## Lorellyn

After shopping for a floor loom at a decent price I've come to the conclusion that making one is the only cheap way out. However, an alternative might be a product of Lorellyn Weavers who are located near Grass Valley, California. Mr. Crandall makes a quality loom at about half the price of many others I looked at. He is a good conversationalist and loves to answer weaving problem questions if you drop in. Go pick up your loom and learn a lot. Crandall has been into weaving for say over 30 years.

14 inch, two harness table model \$35.00  
20 inch, four harness floor model \$65.50  
30 inch, four harness floor model \$85.50

Prices are F.O.B. Chicago Park, California. Larger looms are available and you can request info about these. Crating charges run \$2.50 to \$3.50.

Free brochure:  
Lorellyn Weavers  
Box 56  
Chicago Park, CA 95712

Kam  
Nevada City, CA

## Looms From Sweden

These are fine looms that are cheaper than equivalent looms on this continent. Cheaper, including shipping and customs (there seems to be no tariff category applied directly to looms to persuade customs officer to classify it as a sewing machine which is the lowest rate conceivably applicable. If he's nice he'll do it automatically). Not only does this firm offer good quality equipment—these looms are built in more or less the traditional Swedish loom design (weaving having been long a prime activity in Sweden) and with the high degree of wood craftsmanship Sweden is noted for (in case you didn't know, Sweden is noted for wood craftsmanship, along with all else). Therefore they are damned good to look at & just have sit around when not being worked upon (maximum wood/minimum metal). Also available are the standard weaving accessories: warping necks, etc. and spinning wheels and tapestry looms. Profusely illustrated catalog available—specify English supplement or know Swedish.

Glimpura Väststols Fabriken  
Glimpura  
Sweden

Carole Beadle says an absolutely prime source of all manner of Swedish weaving equipment is:

Gunnar Andersson  
Växjöverkstad  
292 00 Mora  
Sweden

## Macomber Ad-a-Harness

32" 10 harness

L. W. Macomber  
166 Essex Street  
Saugus, Massachusetts



## TERMINAL

As D.R. came out of the men's room he was flashing on the word terminal. T-E-R-M-I-N-A-L. I am in a terminal. The end of a line. Three vowels, an a, an i and an a. And three syllables, three very neat and pungent syllables each with a vowel nestled in its middle like a jewel. How balanced. How very balanced is the word terminal, in content as well as form. At a terminal people arrive and depart, they begin new journeys even as they are ending old ones. Both things happen at a terminal; it goes both ways. It's like calling graduation commencement. Commencing as you end. Indeed, because you end. Like living because you die. That's a very religious idea. But terminals are very religious places. Look at this room. A waiting room. People gathering in off the streets to wait together for the next thing in their lives. A place to come and wait. Waiting as a form of worship, sitting in these pews. Estelle is there in a pew. She could very well be praying. Praying and waiting, waiting and praying, how balanced, how even. I wonder if she'll like my outfit.

"How do you like my outfit?" D.R. asked Estelle. He had come up from his blind side, down the lane between the rows of pews, and his voice started her and made her jump. She looked around at him, and smiled. But it was a feeble smile. Estelle seemed confused. Then D.R. noticed there were tears in her eyes. He sat down and put his arm around her and asked her what was wrong.

Estelle shrugged his arm away. "Nothing's wrong," she said.

"But you're crying."

"I'm not crying," said Estelle.

"But you are, honey. I see the tears in your eyes."

"Please don't say I'm crying when I'm not," said Estelle.

"I'm all right."

"But honey..."

"Oh!" Estelle exclaimed angrily. And she got to her feet and moved several seats away.

D.R. followed her and tried to put his arm around her again.

"Estelle, something's wrong..."

"You're hassling me is what's wrong!" Estelle turned to look D.R. in the face then, and when she did the tears spilled over and she really began to cry. She looked awfully sad to D.R. then, quite weak and helpless and worn down, and he wanted more than ever to take her in his arms. But the same pleading that had been in her voice was in her eyes now. She truly wanted to be left alone. D.R. leaned back in his seat and gazed around the room. A minute or two later he leaned over and whispered that he would be right back. Then he got up and walked to the row of telephones by the wall on the far side of the room.



## Condon Woolen Mills

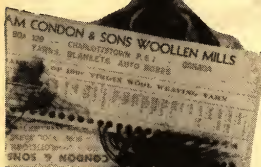
Excellent source of high quality 100% virgin wool yarn available in broad range of colors and sizes for use in weaving, knitting, crocheting, rug hooking, afghans. Yarn sizes include 1-ply single for weaving and knitting fine garments, 2-ply fine & medium, 3-ply, and 5-ply bulky for rug hooking, heavy sweaters. Of special interest to color-fanciers: Condon offers several yarn colors which are not to be found anywhere else. Service is good—West Coast orders usually arrive in a week. Prices including duty are \$3/lb natural colors, \$3.20/lb dyed.

—Sarah Khan

### Color cards

### free

from:  
William Condon & Sons Woolen Mills  
P.O. Box 129  
Charlottetown, P.E.I.  
CANADA



## Lily Mills

### Good yarns

Lily Mills Company  
Shelby, North Carolina 28150

### Art. 814—Lily Rug Weave Yarn

#### Fast Colors

Shades — Approx. 80 Yds. — PRICE 37¢ PER SKEIN

1 White	22 New Orange	62 Emerald Green
2 Black	26 Lt. Blue	70 Lovender
3 Cream	28 Delft Blue	75 Purple
4 Natural	29 Dark Blue	86 Lt. Grey
10 Yellow	36 Turquoise	87 Grey
11 Canary	41 Salmon Rose	90 Beige
12 Charreuse	46 Rose Pink	95 Red
16 Flamingo	47 Lt. Pink	105 Wine
17 Bright Gold	55 Lt. Green	120 Brown
18 Antique Gold	58 Hunter Green	124 Dk. Brown
20 Orange	59 Dk. Green	129 Rust
	61 Med. Green	171 Avocado

## 2 More Yarns

### Knitting, Weaving and Crochet Yarns

Here's two more super yarn addresses:  
Simons, 2994 Atlantic Street, Berkeley, has 28 beautiful rainbow colors of pure wool as well as mill ends (good value), odd lots, macramé, embroidery and weaving supplies. Send fifty cents for a sample chart of standard stock colors.

Mairi MacIntyre, Ltd., Fort William, Scotland, has a wonderful assortment of "Scottish's Finest Woollens." The Shetland colors; pheasants, grouse, flint, blue hick, crop rate, and jessels to name a few. They're the most beautiful I've ever seen. Send 25 cents to cover cost of postage and color chart. They come by boat so it takes a while. I ordered yarns from there 10 years ago and several of the sweaters I made are still going strong. Mairi MacIntyre works the postage on orders and sends along an invoice with orders. International Money orders are the best form of payment. I believe orders valued less than \$10 will come in duty free.

Jeanie Darrington  
Miranda, Calif.

## Iceland Yarn

At about 1/2 the price sold for in this country—if you can get it. For weaving and knitting. Exceedingly warm, soft, and durable. Hand washed, combed, and spun natural (undyed) wool. In six shades (see Nos for ordering appended):

White	Farve 54	Pásti 145
Light grey	56	2
Med. grey	57	47
Rusty brown	66	275
Tan	53	56
Dark brown	52	244

The color of the wool is the color of the sheep. Which is a nice thought.

### Name & address:

Rannagerdinn  
Hafnar Street 5 & 17  
Reykjavik  
Iceland

**170** Wool & Yarn  
Craft

## CUM Yarn Samples

Though one can stockpile free & usually mediocre yarn catalogs, \$3 sent to CUM brings a large binder filled with sample-cards of handweaving yarns of finest quality, large color range, yet cheaper than dime-store knitting worsted.

CUM is now set up to handle U.S. orders; their catalog/price list is in English, gives prices per pound in dollars, unlike other European yarn houses. Samples include 1 & 2-ply woolen yarn, rug, tapestry & knitting yarns, worsted, cotton & linen yarns, rug warps, twine. All yarns are mothproofed, prices average less than \$3/lb. for yarns of high quality, esthetically and structurally. Delivery time approx. 6 weeks by ship, less than 2 weeks by air.

—Sarah Khan

### Catalog & samples

\$3.00 postpaid

from:  
CUM Textile Industries, Ltd.  
Rømersgade 5  
1362 Copenhagen K  
Denmark

### Yarns

You may be interested in the following yarn manufacturers for the Whole Earth Catalog or whoever can use them.

Countryside Handweavers, Inc.  
Box 1225  
Mission, Kansas 66222

Swiss goatshair, cowhair, swiss linens, Swedish rug yarns (wool). Beautiful yarns, high quality. Will send samples and prices.

Frederick J. Fawcett, Inc.  
129 South Street  
Boston, Mass. 02111

Beautiful linens, all weights, natural or dyed (the natural dyes very well). Will supply samples & prices. Very good quality.

Multiple Fabric Company  
Dudley Hill  
Bradford, 4, England

All beautiful yarns. Wool, camel hair, mohair (heavy weight) horse hair. Really fine yarns. Will send samples & prices.

Briggs & Little Woolen Mill, Ltd.  
York Mills, N.B. Canada

Weaving & knitting wools, good quality—natural wools dye very well—also may order color yarns. Will send samples & prices.

Craft Yarns of Rhode Island, Inc.  
603 Mineral Spring Ave.  
Pawtucket, Rhode Island 02862  
(Formerly Troy Yarn)

All beautiful yarns, wool & synthetic. These yarns have fantastic colors. Will send samples (25 cents each) and prices. Linens, loop mohair, mohair, etc.

### Mexikilens

c/o Sharon Murfin  
1741 Alton Way  
Berkeley, Calif. 94703

Handmade wools—all beautiful but very expensive from this supplier. Will send sample cards & prices.

The Mannings Creative Crafts

East Berlin, Pa. 17316

They sell seconds from other manufacturers—also have a good book list & other supplies—Will send everything you need. Good prices on yarns.

Pat Eckard  
Hickory, North Carolina

Four suppliers of wool and spinning equipment, heard from at the last minute.

Colonial Textiles  
The Sheldon's  
2604 Cranbrook

Ann Arbor, Michigan 48104

Greentree Ranch Wools

Routte 3, Box 461

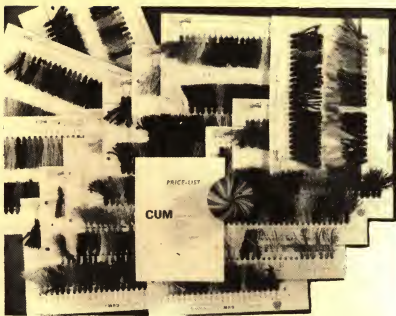
Loveland, Colorado 80537

Great Lakes Wool Growers Corp.

901 Sentry Drive

Waukesha, Wisconsin 53186

Yarn Primitives  
Box 1013C  
Weston, Connecticut 06880



## Cambridge Wools Ltd.

a new Zealand wool source.

—jd

### Catalog

### free

from:  
Cambridge Wools Ltd.  
Box 9572  
Auckland, New Zealand

Scoured Wool 46/50S Quality. Crossbred 4 to 5 inches.

AUST. 60c lb. U.S.A. \$1.00 lb.

N.Z. 55c lb. U.K. 6/4b. CANADA \$1.00 lb.

### Natural.

As shorn from sheep. Medium quality (50S) 5 to 7 inches.

AUST. 60c lb. U.S.A. \$1.00 lb. N.Z. 50c lb.

U.K. 5/4b. CANADA \$1.00 lb.

Black/Grey U.S.A./CANADA \$1.20 lb.

### SHEEPSKIN RUGS:



AUST. \$9 U.S.A. \$12 N.Z. \$7.50  
U.K. £5.10.0. CANADA \$13

## Natural Yarns

I would like to suggest handspun yarn from Paula Simmons.

Yarn like this really makes it worth one's while to weave or knit. Undyed, unbleached yarns that come in many shades and mixtures of cream, red, brown, grey and black—the Simons sheep yarn that way. I once saw a pett from one and am sure it could double for costly.

Will be brown tweeter is super warm, soft, nearly waterproof and BEAUTIFUL.

The yarns are in many thicknesses to you can make a bear sweater or a delicate baby garment. Mrs. Simmons also weaves for her yarn and sells the product as well as giving you advice on knitting or weaving with it yourself.

Peace,  
Joan Black  
St. Louis, Missouri

Paula Simmons

Suquamish, Washington

Price is 92 cents per ounce, plus postage. Yarn is completely pre-shrunk, in center pull balls.

## Imported Wool

Unusual yarns from Iceland, Canada, Finland, Norway.

Elizabeth Zimmerman, Meg Swanson  
Box 57  
Trumansburg, N.Y. 14886

## Japanese Yarns and Threads

Very good, very cheap; beautiful samples. Embroidery primarily.

[Suggested by Sarah Kahn]

Olympus Thread Mfg. Co. Ltd.  
8-9, Nishiki 3, Naka-ku  
Nagoya  
Japan



## The Complete Book of Progressive Knitting

This is the most complete knitting book that I have seen. It discusses yarn, its qualities and history, and gives clear instructions on the basics of knitting. Where other books only give directions cryptically written as 'K1, \*V.O., K2 together' 'K1 repeat this row for the desired no. of rows', this book tells you how to figure out the number of rows for all types of garments from sweaters to suits. The only real drawback I could see was the book's illustrations. (Reviewed by Lois Brand)

The Complete Book of Progressive Knitting  
Ida Riley Duncan  
1996, 386 pp.

\$2.75 postpaid

from:  
Liveright Publishing Corp.  
356 Park Avenue South  
New York, N.Y. 10016

or WHOLE EARTH CATALOG



The knit stitch is the foundation of all knitted fabrics.

Position of the Hands. The needle containing the loops to be knitted is held in the left hand with the needle underneath the hand as in Plate XVI. The other needle is held in the right hand as one would hold a pen or a pencil. There are many ways of using the yarn to be worked over the fingers, but whichever is used there should be no tensed muscles and no stiff fingers. Knitting for relaxation requires no tension. It is preferable that the yarn be fed over the fingers of the right hand. This is the only way different colored yarns may be worked in a pattern without having a long loop at the back of the work.

The yarn passes over the index finger of the right hand, around the middle finger and is held by the other fingers. It is the way in which the yarn is held that makes the tension of the stitch. There is no holding the yarn or gripping of either the yarn or needles. The knitting should be worked with ease and the yarn drawn smoothly through the fingers.

Buttonholes are knitted as the fabric is being made, not slashed as in sewing. Therefore, it is advisable when knitting garments, to knit the side on which the buttons are to be fastened first. In this way the position of the buttons may easily be ascertained and marked, and hence be made for the buttonholes. This is important especially where the last buttonhole should be at the neck line. Decide upon the size of the button. If bands are used, the buttonhole is made in the center of the band. The width of the band usually depends upon the size of the buttonhole, that is, if a buttonhole requires 4 stitches, the band should be at least 8 stitches wide. The buttonhole is made on each side of the button on each side of the buttonhole.

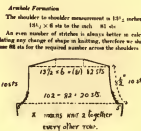
Method. The position and size of each buttonhole having been ascertained, bind off the necessary number of stitches at this point. Continue to complete the row as previously, and back again to where the stitches have been bound off. The stitches are added the same way as the second method in the Chapter on Fundamentals.

Note. Turn the work to the wrong side to add the stitches and back again to the right side after they have been added.

After the garment is completed, the buttonholes should be finished with buttonhole stitches, using the same yarn if possible, or a great pretension in the thread, especially where there are young children.

Garments of pure wool yarns are hard to ignite even with a shortness, unsurpassed by any other fiber, and lightness is one of the essentials of modern attire.

Wool may be knitted or woven into fabrics of delicate shewiness, unsurpassed by any other fiber, and lightness is one of the essentials of modern attire.



every row.

## America's Knitting Book

Did you know that sweater sizes aren't standard? I didn't. Gertrude Taylor tells you how to choose your correct size by glancing through the pattern direction: Add the no. of stitches in the complete bust line and divide by the stitch gauge. This will give you the correct size. Be warned to add 3 inches to your actual measurement for ease.

America's Knitting Book contains all the information needed for a beginner in an easy to understand style.

"Do not hold needles like a pencil. Perch up on top of the needles." How many people quit before starting because it was too hard to hold needles like a pencil?

The instructions are good and the graphics don't look like 1940. There are also lots of stuff that's far too advanced for me to really comment on except to say that I felt that I could do it with the instructions given.

[Reviewed by Lois Brand. Suggested by Ann Hresko]

America's Knitting Book  
Gertrude Taylor  
1986, 288 pp.

\$9.95 postpaid

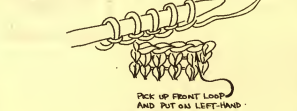
from:  
Charles Scribner's Sons  
Vreeland Avenue  
Totowa, N.J. 07072

or WHOLE EARTH CATALOG



### The Improved Horizontal Buttonhole

Starting at the front edge, work two stitches (or whatever your pattern calls for), bind off the next four stitches (or whatever your pattern calls for). Work to the end of the row. On the next row, work until you come to the hole, then turn your work around and "knit on" four stitches as in making the regular buttonhole, then pick up the front loop of the first bound off stitch and slip it onto the needle next to the knit-on stitches. Then turn your work around again and work to the end of the row (2 stitches). On the following row, work two stitches then knit together the "picked-up bound off stitch" and the last stitch of the knit-on stitches.



This buttonhole may be used whenever you are working with knobby or nubby yarns and cannot plan on hand-finishing the buttonholes. If you are working with smooth yarn, you will be hand-finishing the buttonholes, and it is not necessary to use this improved buttonhole.

### TELEPHONE CALL

D.R. dropped two nickels in the pay phone and dialed his sister's number. But as soon as he heard it ring he hung up, and his nickels began to chime clanging down the shoot. Then he was so pissed at himself for not completing the call he hit himself on the leg with the telephone. I didn't want to go outward through his thigh and turned to put it made him feel so one-sided and imbalanced he had to hit himself on the other leg to keep it all from toppling over.

There weren't many people in the bus station that hour of the morning, and no one was using any of the booths. So D.R. stayed in his booth after his abhorred call to think things over. He guessed that was what Estelle was doing too. Her pose even resembled that of The Thinker. D.R. saw her through the window in the door of the phone booth. She hadn't moved since he left her. She sat turned to one side, one hand propping up her forehead, her elbow on her knee. She looked very unbalanced sitting like that, very awkward and unnatural. To balance it, D.R. sat up very straight in the phone booth, with both feet flat on the floor and his hands on his thighs, palms down. That did it for a minute or two. But then D.R. realized that his left nostril was stopped up, and that his breathing was very unbalanced as a result. His solution was to move his right foot until the heel was off the floor, getting the right foot out of phase as compensation for his malfunctioning left nostril. That felt pretty good. He held the position the next few minutes as he tried to think things over.

What in the goddamn hell's going on? In the long run I really couldn't say, but in the short run, to tell the absolute truth about it, what was going on in my head was that Estelle here and out to Marcelle's by myself. To check up on her, I'd want to go see where it's all at with them see what kind of vibes I get, sort of break the whole thing in easy-like, and bring Estelle out later. Marcelle doesn't know about Estelle's coming, I didn't want to hold the information from her. I just more or less didn't tell her I was travelling with my chick. And I don't want to go busting into their bough with a lot of waistline and heavy vibes and freak everybody out that, that's all. It's very simple.

D.R. eased his pose then, and slumped over, relaxed. His little rap with himself wasn't at all conclusive, but somehow he felt better for it. The thing to do was call Marcelle and tell her where he was and that he'd be coming on out after while. That was the thing to do.

Encouraged, and determined this time, D.R. put the nickels in the phone again and started to dial. He put his finger in the hole, he felt the cold metal of the thingy you dial against his finger, he put his finger right up there in the hole and started to dial. And then didn't. Instead he placed the phone on the little metal shelf, ran to the next phone booth to get that number, then came back to the first booth and dialed it. When the phone in the next booth rang he went over and answered it.

It was for Estelle. "Hold on a minute, please," said D.R. and he went over to the seats and told Estelle she had a phone call. Slowly she lifted her head to look at him. She wasn't crying now. Her eyes were red, but she placed the phone on the little metal shelf, ran to the next phone booth and dialed it. When the phone in the next booth rang he went over and answered it. He was for Estelle. "Hello, Estelle? This is Divine Rightavenport. I want to talk to you."

## Knitting Dictionary

The best book that I have found on knitting and crochet stitches is: Knitting Dictionary: 800 Stitches, Patterns, and knitting, crochet, and more. \$1.95

This is the most complete book that I have found. It is well organized and explains things so that if you know the basic knitting terms you can follow it. Besides being all the above it is small enough to be carried in your pocket. I've used it many times. When I wrote, I found one there and latched on to it. Upon returning to school in Ohio, I went to a bookshop downtown and there was a whole stack of them. It's really great!

The Knitting Dictionary is distributed by  
Crown Pub. Inc.  
419 Park Avenue So.  
New York, N.Y. 10016

\$1.95

## Silk

Silk yardage from Thai Silk Company, 311/6-7 Surawongse Road, Box 906, GPO, Bangkok, Thailand

I don't know that the item warrants a review as such. It is just the most beautiful fabric I've ever seen. When you see it you know you must wear it. I've never seen their incredible colors in any other fabric. Comes by the yard, 40" width, 3 or 4 different weights, solids (which are really made with warp & weft of different, sometimes complementary, colors) and gingham-type plaid (1" or 2" checks.) When I wrote, ca. 2 years ago, they had sent generous samples for 1 genuine U.S.A. quarter.

Charles Eby  
Laurel, Md.

## Baskety

Who knows about baskety? What do you think of this book?

(We asked that two years ago and received not one reply. Hello? Hello?)

Baskety  
F. J. Christopher  
1952; 108 pp.

\$1.25 postpaid

from:  
Dover Publications, Inc.  
180 Varick Street  
New York, N.Y. 10014

or WHOLE EARTH CATALOG



Space—considerable work space—is needed for the practice of baskety, and it is a rather messy operation because of the necessity for keeping material damp. It is therefore not a craft that can be pursued in a corner of the living room (while looking at television). It also calls for a patient and careful temperament.

Most kinds of redwork last a very long time, if they are well made in the first place, but naturally they do not stay clean indefinitely. Reed and willow can be brushed or washed in clear warm water. Soap should not be used as it tends to lodge in the cracks. Raffia work can be washed with soap and water. It should be allowed to dry naturally away from the fire, though if it is left out in the sun, it will become slightly bleached.



## The Illustrated Hassle-Free Make Your Own Clothes Book

We have a new game in our commune which consists of shouting, at appropriate moments, such inventions as "Right arm!", "Outta touch!" and the like. Revolution takes all sorts of forms these days, & making your own clothes is one way to play fiddle-fuck-around with fashion-sexism, consumption-pushing, & related evils. Not to mention such personal benefits as being comfortable, feeling good, & looking however you want to. This simple & charming book sure seems to give you all the basic information you'll need to get into it, plus numerous patterns & ideas. And probably sufficient inspiration to carry you into lots of new creations on your own. Outta style! Right size! and so forth.

[Reviewed by Diana Shugart]

Note: The price on this nice book is ridiculous. Wait for the \$1.95 paperback in 1972.

### The Illustrated Hassle-Free Make Your Own Clothes Book

Sharon Rosenberg, Joan Wiener  
1971; 154 pp.

\$7.95 postpaid

from:  
Straight Arrow  
World Publishing Company  
110 E. 53rd Street  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



Sharon wins in Formentorina under a pair of shoes and the sand so hot on her feet. Under the porch of Mark and Julia's house was an abandoned pair of espadrilles with a hole in the right leg. They fit but she didn't dig the hole. She sewed it up with some wool Julia gave her but thought, "That looks silly." Unknown to her, she had used the Overcast Stitch (see p. 17). So, what she did next was sew a flower onto the shoe. This was her first attempt at embroidery. Then she sewed a butterfly on the left toe to balance out the effect. When the espadrilles were to nothing, she put the butterfly in a plastic bag which sits in our sewing room in San Francisco.

At some time or other, everyone has had an indispensable pair of pants—jeans or chinos. And just like Roy Rogers when Trigger died, they are loathe to part with them until the irreversible moment when these pants rip at the knee. Rather than stuffing them—as was Trigger's alleged fate—the pants can be turned into cut-offs by a mere snipping off at the knee. This, then, is re-cycling in its most common incarnation. Just as organic wastes are re-cycled, clothing scraps can be used again, old clothes can be magically transformed by a bit of imaginative remodeling, rips can be repaired and all sorts of things can be re-made into perfectly pleasurable, wearable garments without having to be thrown out.

## Mariposa Codpiece

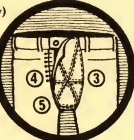
Enough of these stupid blouses. Sew a sensible codpiece. Sew a feather on it.

[Suggested by Anthony Dubovsky]

Codpiece pattern (with history)

\$3.00 postpaid

from:  
The Giant Dwarf  
Box 77011  
San Francisco, CA 94107



## Coats & Clark's Sewing Book

There's a lot of sewing books. This is the best one. Good information, best price.

—\$8

Coats & Clark's Sewing Book

1967; 224 pp.

\$3.95 postpaid

from:  
Golden Press, Inc.  
850 Third Ave.  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



## Successful Sewing

1. Contains a good list of equipment with reasons for having each item.
2. Contains a good chapter on the selection, use and care of a sewing machine for you.
3. Contains a clear explanation of sewing processes generalizing whenever possible, and not creating a lot of special cases.
4. Contains a complete section on fabrics, fibers, and finishes including background, use, properties and home laundering instructions.

[Reviewed by Lois Brand]

Successful Sewing: A Modern Guide

Nesta Hollis

1969; 206 pp.

\$8.75 postpaid

from:  
Tappan Publishing Co., Inc.  
29 East Third Street  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

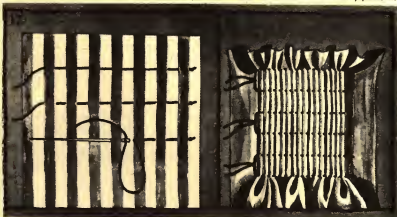


Practice sewing straight. If you have never used a sewing machine before, it is a very good idea to start by sewing practice lines, angles and curves. One sewing machine manufacturer, Viking Husvarna, produces practice sheets (domestic science teachers and college lecturers can make block applications for classroom use) and they have given me their permission to reproduce two of them here. ... Sew along the lines keeping as accurate as possible. Do not watch the needle but keep your eyes on the sewing line. If you wish you may sew without thread on these practice squares, though it is perhaps more encouraging if you do use thread.



Practice patterns.

There is more than one kind of smocking. What we give you here is English smocking, in which the fabric is first evenly gathered on the wrong side, and gathers (pleats) are held together by embroidery on the right side. Evenness in gathering is essential. Striped (1/8" or checked (1/8" or 1/4") fabric provides a built-in guide, and is highly recommended, especially for beginners. With striped fabric, horizontal guidelines must be added on wrong side with pencil and yardstick, placed to correspond more or less with the embroidery pattern.



12

11

FOR MARKING

\*Dressmaker's Carbon Tracing Paper and Tracing Wheel (11)—For transferring pattern markings to fabric. Paper comes in several colors. Wheels come with or without teeth. See MARKING.

\*Teller's Chalk (12)—Also used for transferring pattern markings to fabric. Clay chalk comes in red, white, and blue, in squares or in pencil form.



French seam. This is the traditional seam for fine, hand-sewn lingerie, but whether sewn by hand or by machine, a French seam can also be extremely useful for other garments, and especially for fine garments for babies and young children, where frequent washing might cause an unfinished seam to fray or unravel.

Like the flat fell seam, the French seam is produced the "wrong way"—the wrong side of the fabric are placed together for stitching, so that the raw edges appear on the right side of the article.

Instead of stitching on the seam line, stitch nearer to the raw edges of the fabric—say about 3/8 in. from the edge of the fabric. Trim the seam allowance slightly; turn article to the wrong side. Fold along the stitched seam line so that the right sides of the fabric are touching. Press along the fold, and make a line of tacking stitches 3/8 in. from the fold. Then stitch. No raw edges should be visible on the right side of the fabric; nothing looks worse than a French seam where strands are trapped in the seam, and there is almost no way of getting rid of these untidy ends once the seam has been stitched. Finally, open and press.

## Sincere's Sewing Machine Service Book

Get an old Singer. Among new machines people seem to favor Viking, Elna, or Bernina.

Just thought you'd like to know there's a sewing machine fix-it book.

—\$8

Sincere's Sewing Machine Service Book

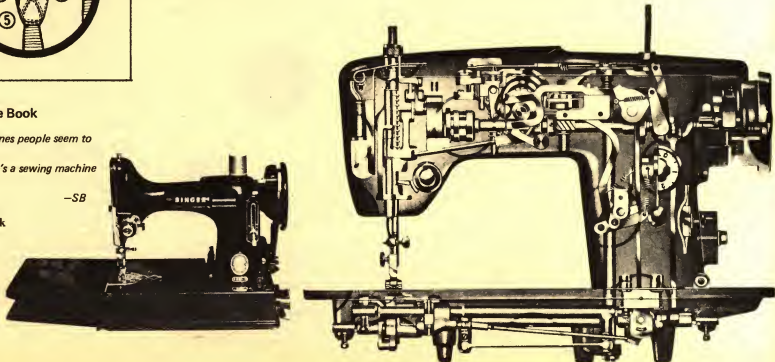
William Ewers

1968, 1970; 200 pp.

\$9.95 postpaid

from:  
Sincora Press  
Box 10422  
Phoenix, Arizona 85018

172 Sewing Craft

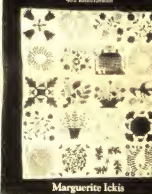


## The Standard Book of Quilt Making and Collecting

I can remember the feelies, the little yarn tie-together things, on my baby quilt, and lying there, wherever, twisting them, between thumb and nospickin' finger, like I would a nipple, now, ah, quilts. This book is the only one I know of that really gets into quilting, illustration and patterns for about two hundred different beauties.

-jd

## The Standard Book of Quilt Making and Collecting



Margarette Ickis

## One Hundred Embroidery Stitches

For those of you who want to learn how to do embroidery rather than gaze upon lovely & expensive color photographs of how someone else did it this is the best and only necessary booklet. It contains schematic diagrams of the most popular & useful stitches with short suggestions for their application to various embroidery situations. I've "taught" several people embroidery & my first lesson is "buy this book." With the lowest price-per-stitch rate of any text on the subject it is invaluable.

[Suggested and Reviewed by Peter & Catherine Yronwode]

One Hundred Embroidery Stitches  
Coats & Clark's Book No. 150  
1964; 34pp.

\$35

from:  
Coats & Clark's Sales Corporation  
430 Park Avenue, New York, New York 10022

## Handbook of Stitches

200 embroidery stitches, with descriptions, diagrams & samplers. Compact handbook, good for beginners.



Grete Petersen and Else Svenner

1959, 1966, 1970; 76 pp.

Handbook of Stitches  
Grete Petersen and Else Svenner  
1959, 1966, 1970; 76 pp.

\$3.95 postpaid

from:  
Van Nostrand-Reinhold  
450 West 57th Street  
New York, N. Y. 10001

or WHOLE EARTH CATALOG



Hope Hanley

1964; 158 pages, 8 x 10 1/2.

\$7.50

from:  
Craft & Hobby Book Service (p. 164)

or WHOLE EARTH CATALOG

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In general, the following materials are a good selection for any patchwork quilts:  
Body of quilt: Muslin (first choice), linen, broadcloth, cambric or percale.  
Designs: Gingham, percale, calico, shirting, or broadcloth.  
Of course you may make your quilt of silk, woolen, or satin. The block background and pieces in the design must be of the same material. One last word of warning: measure all your materials carefully and be sure that you have too much rather than too little. Colors are exceedingly hard to match, even in the same shade from another bolt.

The Standard Book of Quilt Making and Collecting  
Marguerite Ickis  
1948; 59; 273 pp.

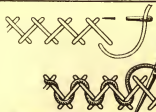
\$3.00 postpaid

from:  
Dover Publications, Inc.  
180 Varick Street  
New York, New York 10014  
or WHOLE EARTH CATALOG

RUNNING STITCH



MORNING STAR



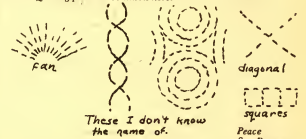
Herringbone Stitch and Threaded Herringbone Stitch

Maltese Cross

This decorative motif is worked in a way similar to Interlacing Stitch. The interlacing of the Herringbone Stitch must be worked accurately, otherwise the interlacing cannot be achieved. Bring the thread through at (A) and take a stitch

## Quilt Making

- In answer to the section on quilts in the Fall 70 issue of the catalog.
- \$2.50 is too much for M. M. M. You can get it cheaper by writing M. M. M. We only pay 92 cents a roll.
- Don't use cotton or cotton batten, and tie your quilt together. After 3 or 4 washings the cotton batten up and separates into wads. A good quilt must be made to last at least 10 years.
- For the same reason, we could not advise using old clothes. You can't tell how they will hold up. Use an old army blanket or some such blanket.
- Quilt patterns are regional. In isolated places like Appalachia you can run into patterns you can't find elsewhere. Raton's Book of Southern Highland Crafts lists many. M. M. M. lists generally known ones. Many patterns also are known locally by different names. The quilt patterns you show in the catalog above the needle names. An Hawaiian addition of quilt patterns taken over by the missionaries, then adopted by the Hawaiians into late, sea-floor patterns—and then later taken back to the mainland. I have a book showing demonstrating quilting at the Smithsonian Craft Festival last summer in Washington, D.C.—a Hawaiian lady rushed up to us, and asked where we had gotten the Hawaiian pattern. Mrs. Johnson, who had made the quilt—just knew it as a pattern "from across the waters." I later wrote to the Honolulu Academy of Fine Art and they sent a catalog listing some of these patterns.
- There are other ways to quilt other than tie or completely quilting a quilt by hand—
  - Quilting every other block. You can do this in the evening while sitting in a rocker.
  - Quilting by machine—either quilting the quilt with a straight or zig zag stitch after the quilt is finished, or—to quilt the square in the machine, then join the squares together and finish the raw edges (which should be top side) with a finished piece of cloth. I am enclosing a picture of a finished quilt made in this method. A beginning machine quilter might find it easier to quilt like this in small squares, rather than tackling the whole quilt.
  - Don't limit yourself to traditional patterns. Create your own. One of our most successful quilts is a tie-dyed or large piece of multi-hand quilted in the patterns the designer made. Nobody can piece together a pattern, but care should be given to figuring out what you want to do, cutting a pattern out of cardboard, and then getting all your pieces cut just right. I always think that the hardest thing to do about quilting is to cut the pieces ahead.
  - Patchwork skirts are easily made from 1/2 a full bed size quilt top. I don't recommend a cotton batten filler, it makes the skirt too heavy. We put in a muslin lining, the same as the quilt, and then hand quilt a pattern in alternating squares.
  - Quilting patterns common here:



diagonal squares

These I don't know the name of.

Peace Sue Ramsey Heller, Ky.

"Wash" the quilt

D.R. said, "Estelle, we've got to talk."

Estelle didn't reply immediately. She was looking out her window at an old lady buying something at the magazine stand.

She was the oldest lady buying something Estelle had even seen in a place like a bus station and she was fascinated. The lady had on a long winter coat and a furry hat with two white feathers on the side.

She carried an umbrella on her right arm, an enormous pocket book on her left, and leaning against her leg was a large shopping bag running over with stuff. She'd been standing at the counter long enough to buy reading matter for a year but when she turned away, after going through a very complicated money routine with the clerk, all she had was a candy bar.

"Hey, Estelle. You there?"

"I'm watching a lady buy a candy bar," said Estelle. "Do you see her?"

D.R. hadn't noticed the old lady, but now he looked over toward the magazine stand. They watched as she stooped over to put the candy in her shopping bag. The bag was so full of stuff the lady had to shift the parcels on top just to make room for the candy.

Estelle held her breath for fear the bag would tear and spill its contents all over the floor. But it held, and after a good deal of rustling and shuffling and hassling with her umbrella and pocket book, the old lady finally got herself together enough to pick up the shopping bag and walk around the corner toward the loading zones.

"Wasn't she beautiful?" said Estelle.

"She was very far off," said D.R. "Estelle, listen. We've got to talk."

"What do you want to talk about, D.R.?"

"I don't know," said D.R. He had to clear his throat. He cleared it twice, but it was still raspy when he said, "It just seems like everything's getting weird, that's all. I feel totally weird."

"Maybe it's something you are," said Estelle.

"No! No! No! I'm not anything I ate. It's this sense I've got. It's this feeling."

"You sound very far away," said Estelle. "Is this a long distance call?"

"You're the one who sounds far away," said D.R.

"I sound far away?" said Estelle.

"Yes. You're talking to me very weird."

"I'm talking to you weird?" said Estelle.

"Yes you are. And you know it too. You're figuring me up what you're doing."

(continued)

Embroidery & Quilts

173



**Step-By-Step Macramé** (p. 155) has sold 500,000 copies in about 2 years. Does that many people tied in knots reflect some enormous cat-cradle of American psyche going on? —SB

## Macramé, the Art of Creative Knotting

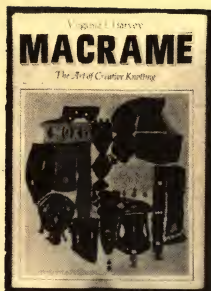
Although designs for knotted pieces differ according to locale and use, there are very few individual knots. Virginia I. Harvey has collected photographs of traditional knotted pieces throughout the world and presents them in a book called *Macramé, the Art of Creative Knotting*. She carefully diagrams the half-knot, square knot, double half-knot, diagonal double half-knot, vertical double half-knot, and other knots. The basic knots are described in detailed instructions for making a sampler. Following the pattern for the sampler will give the beginner experience in doing the knots, and show how combining just a few types of knots can offer large pattern variation.

This book is the best reference manual of knotting technique available. It offers information on all facets of macramé, including discussion on planning, mounting, shaping and finishing a knotting project. Tools and materials are displayed. There are photos exhibiting how different fibers worked in the same pattern can vary after visual and textural effects. The pictorial history of macramé and examples of contemporary knotting projects offer plenty of design ideas for more advanced macramé craftsmen.

Knotters interested in explicit directions for traditional macramé purses can obtain patterns by sending \$1.10 to: Peach Art Studio, 28 Colonial Parkway, Dumont, N. J. 07628 with a request for "Macramé Bags," Booklet A.

[Reviewed by Sue Boyle]

Suggested by Alexandra Jacopetti]



**Macramé, The Art of Creative Knotting**  
Virginia I. Harvey  
1967; 128 pp.

\$8.50 postpaid

from:  
Van Nostrand-Reinhold Co.  
450 West 33rd Street  
New York, N. Y. 10001

or WHOLE EARTH CATALOG

Virginia I. Harvey, author of *Macramé*, announces the new quarterly publication, *Threads in Action*, a technical publication on non-loom techniques. *Macramé* will be the principal subject with occasional articles on stitchery, bobbin lace, netting, knotless netting, sprang, knitting, crochet, and others.

Subscriptions are \$8.50/year

from:  
Threads in Action  
Box 468  
Friesland, Washington 98249  
Individual copies are \$2.50, or  
\$3.25 with yellow vinyl cover.

[Suggested by Helen Bitan]

Also you can get some macramé supplies from:

House of Harvey  
2724 NE 82nd St.  
Seattle, Washington 98105

## Macramé

Virginia Harvey (above) is friendly and very helpful. Dona Melach is trippy and very helpful, and paperback. —SB

**Macramé—Creative Design in Knotting**  
Dona Z. Melach  
1971; 212 pp.

\$3.95 postpaid

from:  
Crown Publishers, Inc.  
419 Park Ave. South  
New York, N. Y. 10016

or Whole Earth Catalog

Beads are an important Macramé adjunct. They provide a surface enrichment compatible with the raised knot shapes and a relief to straight knotting. One problem is to find interesting beads with holes large enough to accommodate double, triple, and more cords required for knotting. There are several ways to overcome the bead problem. Some suppliers are beginning to create beads with large holes. If these are not available, buy string Indian beads, hippie beads, or bamboo curtain beads and cut them apart. You can easily create your own ceramic and paper-mâché beads. When bead holes offer resistance to threading, use a fine wire for stringing or dip the ends of the cords into melted wax, shape the ends to a point, and let the wax harden to make stringing easier.



Two cork squares glued together and covered with paper marked off into 1" squares helps keep lines and angles of cords even. Pins are used to hold cords in place as they are worked.

## Square Knot Handicraft Guide

by any other name, macramé, this book antedates the current enthusiasm about knotting homemade goodies. well illustrated, providing enough projects to get you through this winter, at least.

—fd

**Square Knot Handicraft Guide**  
Paul Graustein and Elmer Wenstrom  
1949; 212pp.

\$4.00 postpaid

from:  
Corbett Maritime Press  
Box 109  
Cambridge, Maryland 21613

or WHOLE EARTH CATALOG

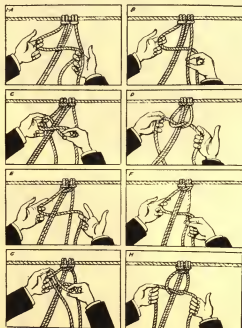


PLATE 1 Illustrated Construction of the Basic Square Knot

## P. C. Herwig Co.

*Calls itself Square Knot Headquarters, has cords, belt buckles, rings, beads.*

—SB



DREADNAUGHT CORD No. 120  
Highest Tensile Strength

P. C. Herwig Co., Inc.  
264 Clinton St.  
Brooklyn, N. Y. 11201



## Macramé & Weaving Supply

Macra-cord, tarred marline, Navy cord, nylon seine twine, rattail, silk deluxe, etc. Samples 50 cents.

—SB

Macramé & Weaving Supply Co.  
63 East Adams  
Chicago, Ill 60603

## Tie and Dye

This is the only book on tie-and-dye that is available in this country. A few other books briefly discuss tie-and-dye, one of the simple means of fabric design, suitable for school children, blah, blah, blah. But Ann Meile treats tie-and-dye like an ancient and complex folk art. Not that she is pedantic. She very clearly explains how to accomplish all the traditional and intricate effects possible with limited materials and free-flowing organic imagination. Tie and dye is such a simple art form that many people have already discovered it, and are doing it without any books to tell them how. So why buy a book?

You can buy bolts of machine printed tie and dyed drip proof, smear dry never iron cotton, ... pretty far out. But the question isn't to be or not to be far out. The question is whether you are into the craft of tie and dye in order to create beautiful objects or just weird artifacts. If you want to really get into it, the book seems really useful and inspiring. If not—well, ...

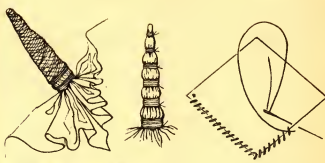
(Reviewed by Terry Gunesch.  
Suggested by Madge Gleeson.)

**Tie and Dye**  
Anne Meile  
1963, ... 1969; 182 pp.

**\$2.95** postpaid  
from:  
Ballantine Books, Inc.  
101 Fifth Avenue  
New York, N.Y. 10003  
or WHOLE EARTH CATALOG



Textured squares



SEWING TECHNIQUE OR TRICK

### Outlining Shapes in Overweaving

Overweaving or whipping stitch can be used very successfully to outline any shape drawn on the piece. Whether further stitching or binding is added within the shape is a matter of choice. This way of outlining does not bunch the cloth up to quite the same extent as a running stitch outline. The scale of the actual stitching may be quite small, about 1/8 in. across, using single or double Sytko, or up to 1/2 in. wide, with double thread. The width of the stitches, that is the amount of cloth picked up on the needle, each time it is inserted into the cloth, decides the thickness of the outline, and their density determines the tone. For instance, a clear-out resist outline will need more stitches per inch than a medium toned contour.

Variation in the thickness and tone of the lines should be exploited in working out designs.

It is almost impossible to get fine delicate designs on coarse fabric, but, on the other hand, with fine cloth any degree of fineness or coarseness in a pattern is possible.

### Method

Draw or trace the design on cloth. Decide which are to be made thick dominant lines and which not so outstanding. With the appropriate cotton or thread, single or double, knotted at one end, begin to sew a little to one side of the line. Take each stitch over and under it at any angle between 30 deg. and 60 deg.

## Helio Batik Dyes

Batik dyes from Canada. (Also see p. 167)

—SB

Helio Dyes  
2140 West 4th Ave.  
Vancouver 9, B.C.  
Canada

**Aiko's Art Materials Import**  
a source of batik dyes and tools,  
Japanese artists supplies,  
books on oriental culture,  
collage papers,  
gardening literature.

—jd

(Suggested by Bob Pullman)  
Catalog  
**\$2.25**

from:  
Aiko's Art Materials Import  
714 North Wabash Avenue  
Chicago, Illinois 60611



**MIYAKO DIRECT DYE** ... A unit of 6 jars or more: \$3.30 (at \$5.5 a jar)

A chemical dye of acid substance in many brilliant colors mostly made up of synthetic and natural dyes. In solid form, easily soluble and capable of penetration to many types of fabrics. Responds better in high temperature, therefore it is primarily used for boiling although it is also used successfully for cold-dyeing such as in the case of batik—then, the process should be completed by steaming. Comes in twenty one colors individually packed in small jars for convenient use. 2.5 oz. In a jar, enough to dye 3 yards of fabric in dark color.  
Burnt Sienna, Pink, Yellow, Burnt Umber, Maroon, Orange, Olive, Red Violet, Sepia, Blue, Light Blue, Red, Crimson, Violet, Ultramarine, Indigo, Green, Prussian Blue, Deep Medder, Black, Grey.

## JAPANESE SHEARS

Made of high carbon steel  
Just grip them is point of your hand  
Left or right as you please and press points together  
Between thumb and best index finger  
No finger holes to get caught

JS...4 1/4" long

### Batik for Beginners

Batik-dyed cloth looks like a stained glass window, when it works, and like the dog was sick, when it doesn't. This is a reasonable beginning text. For even simpler information, Stephen Blumrich at 3223 Hyde St., Oakland CA 94601, has a \$1 pamphlet, Resist Dye Technique.

—SB

### Batik for Beginners

Norma Jamison  
1970; 104 pp.  
**\$2.50** postpaid

from:  
Watson-Guptill Publications, Inc.  
165 W. 46th St.,  
New York, N.Y. 10036

or WHOLE EARTH CATALOG



Another difference between working on paper and working on material is that cloth is pliable and therefore the wax is liable to bend and crack as it is put into the dye. You will have noticed this. It is a characteristic of batik, and one of the recognized techniques, that you use this quality of cracking to add richness and pattern to your design. The cracks may be ordered, to a definite pattern or area, or they may be random cracks used to give a cracked texture over the whole or part of the surface.

To 'crack' the design, the whole surface of the cloth is waxed and left to go cold. In frosty weather a few minutes out in the cold air is sufficient to make the wax brittle. If the wax is brittle, the cracks will be clean end fine. If it is not cold enough outside, put the waxed cloth into cold water for a few minutes.

"I'm fucking you up?" said Estelle.  
"Yes. I feel entirely fucked up. I feel like I'm going out of my goddamn mind if you want to know the truth. And you're giving me all this shit over the telephone."  
"I'm giving you shit?" asked Estelle.  
"Yes!" D.R. yelled. "Yes! You are."  
"Well listen, D.R. do you mind if I ask you a question?"  
"Ask me anything you want to," said D.R.  
Estelle said, "Do you think you're giving me shit too, by any chance?"

"If I am I don't mean it," said D.R.  
"You mean you don't know if you are or not," said Estelle.  
"I mean I don't mean to, if I am. But you mean to. You're really fucking me up."

Estelle said, "What if I told you you were fucking me up just as bad?"

"Well, I'd probably talk to you about it," said D.R. "At least I'm trying to talk to you."

"I think the whole conversation's weird," said Estelle.  
D.R. waited before he spoke again. He cleared his throat, then cleared it again. "Well see if this makes it seem any weirder to you."

"What?" asked Estelle.  
"I see see if this makes it seem any weirder to you."  
"See what?"

"I haven't said it yet. I'm getting ready to say something."  
"Oh," said Estelle. "Excuse me."

D.R. cleared his throat. "I'm thinking the thing to do is for me to go on out to my sister's house by myself. Before I take you."

"What's so weird about that?" asked Estelle.  
"Doesn't that seem sort of weird to you?"

"Not really. You want to go check it out, is that right?"  
"Yeah. Just check it out. Kind of ease into it with them."  
"That seems cool to me," said Estelle. "Why did you think that was so weird?"

"I don't know. Now that I've said it, it doesn't seem so weird any more."

"Is that all you were going to tell me?" asked Estelle. "Is that why you got me on the phone?"

"That's it," said D.R.  
"Can I come out of the phone booth now?"  
"You're free to go anywhere you like," said D.R.  
"Thank you," said Estelle. She hung up then and came out of her booth. But D.R. stayed in his to call his sister Marcella and tell her he was coming out to see her after while.



## Osborne Tools

always wanted to be a saddlemaker, closest I've come so far is disfigure cowboy sandalmaker, try cutting a sole band with a pocketknife, or punching holes with a screwdriver, and you begin to appreciate good leatherworking tools. Osborne is the best.

—jd

[suggested by Michael J. Green]

Catalog  
free

from:  
C.S. Osborne and Company  
125 Jersey Street  
Harrison, New Jersey 07029

QUALITY



Osborne No. 155

Revolving Punch, 6 Tube, Forged steel frame, fully polished. The threaded cutting tubes are hardened and tempered. Length of punch 8 5/8". Furnished with sizes 0, 1, 2, 3, 5, 7.

Price each \$15.00  
Extra tubes each \$1.00

## Cheap Leather

A friend of ours wanted leather but couldn't afford the \$25 or so for the hide and ended up buying a fresh hide from a local slaughter house for \$3 or so and tanned it himself. We personally don't feel inclined towards doing such a thing but he took out monetarily and is richer for knowing how to do it.

Dennis and Becky Crowe  
Warrenton, Oregon

## How to Make Cowboy Horse Gear

A highly practical book on the uses of rawhide. Included is a section on how to cure "green leather" and make your own rawhide. When braided, leather is strong and durable. This book illustrates the use of rawhide for "horse gear"; there are certainly other situations where leather braiding can be used to advantage.

[Reviewed by Mary McCabe.  
Suggested by Gary Snyder]

## How to Make Cowboy Horse Gear

Bruce Grant  
1950; 186 pp.

\$3.50 postpaid

from:  
Cornell Maritime Press  
Box 109  
Cambridge, Md. 21613

or WHOLE EARTH CATALOG



Sonny Strong has passed over the Great Divide, but his way of making rawhide lives on.

This is it: When the hide or skin is taken off the carcass and while the body heat is still in it, spread it out flat with the flesh side up and salt it down with 40 or 50 pounds of fine stock salt. This is for a mature hide. For a yearling or calf skin use half the amount of salt. Spread the salt evenly and fold the hide over so the hair side is out and the flesh sides are together.

Leave the hide in a shady, dry place for from a week to ten days. It is important to salt the hide while the body heat is still in it, Rickman emphasizes. So if you do not actually remove the hide yourself, get the person who does the work to salt it down for you. The salt runs the blood and glue out of the hide before it clogs and Rickman feels this is important in keeping the hide pliable.



## THE SKIFE

Osborne No. 925

Makes a remarkably easy job of skiving. Increases both speed and accuracy. This essential tool is fitted with a Schick razor blade. Price each \$1.50



## SCRATCH AWL

Osborne No. 478

Sharp pointed, tempered blade 2" long - for piecing leather, sewing and a variety of uses. Price each \$0.30



## HOLLOW HANDLE DRAW GAUGE

Osborne No. 51 1/2

Hollow handle draw gauge. Used for cutting leather strips. All metal. Polished head, slide and blade. Japanned handle. Cuts straps any width up to 4".

Price each \$13.75 Extra blades each \$1.20

## Leather Braiding

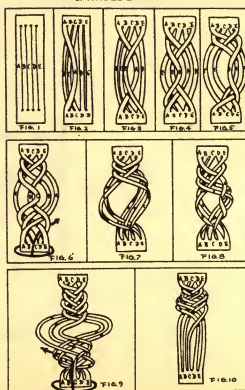
met a guy named Joe Ria at a rodeo, he had a travel trailer full of fancy braided horse gear done by Yakus somewhere in the southwest, and was making his go as a saddlemaker. beautiful work, mostly in rawhide. Bruce Grant has written other leatherwork books, among them, the cowboy horsegear book that has been carried in the catalog. I think this is his best book, deals with the fundamentals of cutting, braiding, knotting, lacing, and applique in leather.

—jd

Leather Braiding  
Bruce Grant  
1950; 173pp.

\$3.50 postpaid

from:  
Cornell Maritime Press  
Box 109  
Cambridge Maryland 21613  
or WHOLE EARTH CATALOG



## MacPherson Leathercraft Supplies

you've probably heard of tandy's, if you haven't, look them up in the yellow pages, (there is one close to you, if you are close enough in to have yellow pages.) well, macpherson's is like tandy, only a little better. some all-in-one do-it-yourself quickly professional type leathercraft kits, and some professional quality tools. they mailorder good leathers at decent prices. (ask for leather price lists) if nothing else, you can get an idea of what you will need.

—Jack Swart  
[suggested by Jack Swart]

Catalog  
free

from:  
MacPherson Brothers  
P.O. Box 396  
San Francisco, California 94101



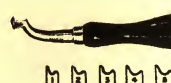
REX RIVET SETTER - A solidly built rivet setter with almost no breakable parts. Will set either split or tubular rivets.

T-88..... \$8.20



## GENUINE WISS BRANDS INDUSTRIAL WEIGHT

20 W 10 inch..... \$10.00  
22 W 12 inch..... \$12.50



EDGE CREASER  
For cranking curves as well as straight lines. Available in sizes as illustrated.

T-21..... \$1.40

## Leather Notes

You list Osborne leather tools (C.S. Osborne & Co., 125 Jersey Street, Harrison, New Jersey) as the best available. Unfortunately this is true they've been the best for many a long year—I'm still using tools my grandfather got from them 50 or so years back and they're still better than anything I can find now—including Osborne. They are living on reputation and a corner on the supply of most serious hand tools for leather. Many of the illustrations in the latest catalog bear only passing resemblance to the tool now turned out. If anyone knows where to get good English or German tools, I'm told these do exist of the old quality, I'd like to see it in the WEC in addition to Osborne and (primarily) Tandy. Good small diamond stitching awls are especially hard to come by. Also a source for a quality stitching horse which is to a leathermith what a loom is to a weaver.

Also would like to recommend Modern Leather Design by Donald Wilcox, Watson-Guptill Publications, N.Y. as a good intro for leather work. It's a 1250 monster and there are more complete instruction manuals like General Leathercraft by Raymond Cherry (Tandemcraft for about \$2) but Wilcox catches the essence of leatherwork. "Leather is Semiotic. It has a texture, a color, and smell to feed it, to see it, to smell it, to excite the senses. Of all the raw fabricating materials known to man, leather is perhaps the most semiotic. A fabric that can, of its own, stimulate the senses has an exciting potential for hand craftsmanship." "Alright, so maybe you'll say that everybody doesn't respond to the same thing. I agree. You've got to point. But I'll insist that you test your own sensory responses to leather. If you don't respond to leather, then you'll have a real problem working with it. If leather says nothing to you, if it leaves you cold as being simply a pile of dead animal material heaped upon a tabletop, then chances are that you've got something serious to offer it as a material for your own design exploration." This guy loves the stuff and is great for instilling (rejuvenating) the spirit in you. Covers all essentials of techniques—especially good section on tools.—and also provides a good list of other books and sources (East Coast mainly) for materials. Read it!

Pace be with you  
Robt. Klahn  
Leathermith

# Community

## The Joyful Community

Who ought to review this book is Ramon Sender, who grew up in a Bruderhof community in New England, and honors his education there. Ramon is the most thorough community personality I've known. A consummate tape-music composer and grass-roots musician, for five years he's been the gentle fiber of Morning Star and Wheeler Ranch, two of the woolliest anybody-communes ever. Did Bruderhof give him his skill and his joy? I now believe it.

Ramon's out of reach of telephones, so I'll have to make my own assertion. This is the best and most useful book on communes that's been written.

—SB



**The Joyful Community**  
Benjamin Zablocki  
1971; 537 pp.

\$1.45 postpaid

from:  
Penguin Books  
1110 Ambassador Rd.  
Baltimore, Maryland 21207

or WHOLE EARTH CATALOG

The Bruderhof is a community unlike any I have ever seen. When I first visited it in the winter of 1966, I felt as if I had wandered in a dream into a medieval village, or into a world outside of history where neither time nor space existed. Never before or since have I felt the presence of brotherly love so permeating a place that I felt I was breathing it. I have visited close to a hundred contemporary communes and studied the history of those of the last century. The Bruderhof can be classified with neither the new nor the old. It is not at all a typical case. I present this study not as a key to the understanding of some larger social movement, but because I feel that the problems that it raises and the solutions that it offers are fundamentally related to our society's quest for *fraternalism*.

The Bruderhof is a federation of three colonies located in New York State, Pennsylvania, and Connecticut. The colonies are known as *hofs* (rhyming with the English word 'loaf'), which is German for 'dwelling place', and Bruderhof means 'dwelling place of brothers'. The total population of the community numbers about 750 men, women, and children holding all goods in common. The Bruderhof supports itself through a commercial industry—the manufacture of high-quality, middle-class, educated individuals. The population is highly diversified in background—ex-millionaires and ex-tramps, holders of post-graduate degrees and grade-school dropouts, a dozen nationalities, and as many religions. Unlike the Hutterites and Amish, the Bruderhof has never become a blood-related ethnic group. The community still has some of its original members and it is beginning to raise a fourth generation of 'labors' children but it has remained constantly open to a stream of new members from the outside world. At the time of this study, the majority of Bruderhof members were converts who had joined within the past ten years. This combination of survival through at least three generations in a continually open membership policy is a major accomplishment, often striven for but rarely achieved among communitarian groups.

A most striking thing about the Bruderhof is the people. Here are no rugged, bearded Amish peasants transplanted from another age but, for the most part, sophisticated, middle-class, well-educated individuals. The population is highly diversified in background—ex-millionaires and ex-tramps, holders of post-graduate degrees and grade-school dropouts, a dozen nationalities, and as many religions. Unlike the Hutterites and Amish, the Bruderhof has never become a blood-related ethnic group. The community still has some of its original members and it is beginning to raise a fourth generation of 'labors' children but it has remained constantly open to a stream of new members from the outside world. At the time of this study, the majority of Bruderhof members were converts who had joined within the past ten years. This combination of survival through at least three generations in a continually open membership policy is a major accomplishment, often striven for but rarely achieved among communitarian groups.

Many communes eventually reach some sort of compromise between anarchism and the need for structure. But a few do a surprising flip from anarchy to authoritarianism, instead and place themselves under the power of some charismatic leader. This draws some people in, but it also draws others out. The flip for structure. It very likely has something to do with the dangers inherent in releasing feelings which has been long repressed.

The absence of money gives a storeroom atmosphere to Bruderhof villages. People seem more colorful, more involved in each thing they are doing, because they are doing it for its own sake, not with the thought of some abstract reward. Even the money that does come comes in the form of a small, regular, and unexciting character. A communal treasurer, called the Steward, keeps track of financial affairs and disburses small sums when needed. When two Brothers were chosen to represent the community in a general demonstration in Washington, D.C., I went with them. They spoke to each other of what an adventure it was to be driving a car of their own, with money jingling in their pockets, thinking about what kind of restaurant to choose for supper. Children sail worms to fishermen along the river. The pennies thus earned became a precious secret and a source of prestige in the peer group. But I met one nine-year-old girl at Woodcrest who didn't know what a dime was when I showed her one.

Economic decisions are made by the Brotherhood or by executives with authority delegated by the Brotherhood, as are all other Bruderhof decisions. When the new Woodcrest dining room was built, samples of various shades of paint were put on a wall and a Brotherhood meeting was called. After a long debate, no opinion could be reached. So they decided to paint one wall the color that the majority favored and then re-evaluate the situation. After the dissenters saw how that one wall looked, they decided to go along with the majority, and the majority, in turn, decided to go along with a few for a communal meeting room, the Housemothers and a few women from the Sewing Room chose the cloth.

## Kibbutz: Venture in Utopia

This book is a straightforward description of one Kibbutz. It is the history, the problems, and the moral codes of a community which began in 1920 and has grown steadily since that time. Over a span of several generations it has grappled with problems, both economic and social, which are similar to problems faced by the community movement in the United States today.

The book examines critically and sympathetically the issues of poverty, marriage, education, comfort, and communication as it has been dealt with over the various periods of this Kibbutz.

While the book is of limited practical value as a how-to-do-it text, it offers a long term perspective on the difficulties and advantages of the community way of life.

[Reviewed by James Fadiman]

**Kibbutz: Venture in Utopia**  
Melford E. Spiro  
1966; 1963; 296 pp.

\$2.45 postpaid

from:  
Schocken Books, Inc.  
67 Park Avenue  
New York, N. Y. 10016

or WHOLE EARTH CATALOG

This is a community which was founded, for the most part, by middle-class intellectuals who deliberately chose to be workers. Instead of aspiring to 'rise' in the social ladder, they aspired to 'descend.'... This Tolstoyan attitude toward work evolved, it is not hazardous to say, only by romantic, inner spiritualists.

But this emphasis on youth and on the equality that exists between the young and the old creates a potentiality for a condition of inequality—an inequality in which the young assume the superior, and the old the inferior, status.

The Kibbutz, it will be remembered, was originally conceived as a means to an end—the creation of the new man. Instead of the selfish, grasping personality created by urban capitalism, there would emerge, as a result of the new social order, a kindly, altruistic personality. This has not been achieved.

Instead of cooking and sewing and baking and cleaning and laundering and caring for children, the women in Kibbutz fields took on saw or lumber or oranges in the children for eight hours a day. The housewife, a specialist in one aspect of housekeeping. But this new housekeeping—more boring and less rewarding than the traditional type.

## Communitas

This book has been around for a good while, and it's still holding its own as a lucid gathering of the elements to think and design with on the subject of communities.

—SB

**Communitas**  
Paul and Patricia Goodman  
1947; 60; 248 pp.

\$1.95 postpaid

from:  
Random House  
Westminster, Maryland 21157

or WHOLE EARTH CATALOG

A major problem of every intentional face-to-face community is its 'cash-crop,' its economic role in the great society that has no integral way of life but has a most integrated cash nexus. Usually the problem is not enough money or credit to buy needed mass-produced machinery. But let us mention a troubling example of a contrary problem. The Macedonia (pacifist) community made pedagogic toys for cash, and distributed them, at cost of production, to like-minded groups like a progressive school; but the blocks became popular and big commercial outfits wanted a large number. Macedonia was then faced with the following dilemma: these commercial jobs would result at very profit; yet if Macedonia itself chose them what the market would bear, the community would itself be contaminated by commercialism.

Yet perhaps the very transitoriness of such intensely motivated intentional communities is part of their perfection. Disintegrating, they irradiate society with people who have been profoundly touched by the excitement of community life, who do not forget the advantages but who then go on in new ways. People trained at defunct Black Mountain, North Carolina, now make a remarkable little village of craftsmen in Newacres, N. Y., (that houses some famous names in contemporary art). Perhaps these communities are like those 'little magazines' and 'little theaters' that do not outlive their first few performances, yet from them comes all the vitality of the next generation of everybody's literature.

## ARRIVAL

If your niece is on one arm and your nephew is on the other, does that automatically balance it? Or do their actual weights have to be accounted for? If their weights have to be accounted for, it's hopeless. But if you can go by how it feels, if a nephew automatically balances a niece, out of your own internal, organic, cosmic, natural reasons, then it's cool and doesn't matter if this particular nephew knocks me and my niece and all of us on our asses.

"Herschel you stop that?" Marcella yelled from the kitchen. She was just coming out with a tray of Pepsi Colas for D.R. and the kids. Herschel had started wrestling with D.R. as soon as he got out of the bus in the driveway. He was nine and about three sizes too big for his age. He wasn't fat, he was just big and husky, in the mold of his father Doyle, who was six feet three. Herschel wrestled with D.R. coming through the house, as though Marcella and gave his niece Debbie a lift and a right across the kitchen, and then he continued to wrestle him right on out the back door and into the yard. Debbie was sitting on the lawn, D.R. suggested they not wrestle any more, but play the lift-and-swing game like in the old days. That was okay for a minute or two. Herschel swung from the right arm and Debbie swung from the left, and for a minute or two the lift-and-swing game was cool. But then Herschel decided that what he wanted to do was lift and swing and wrestle at the same time, which he proceeded to do by getting a firm look around D.R.'s waist with his legs as he hung suspended from D.R.'s sagging forearm. That was when Marcella marcella appeared with the Pepsi.

"You stop that I said," Marcella snipped at Herschel. Then, her voice softer as she placed the tray on the glass metal table, "Your Uncle David is tired, honey. He's been traveling."

(continued)

Forebears  
Community

177



*Peter can write fine. Drop City was the first of current crop of weed patch communes. The first dome-funk display in the U.S. The first nose-tickle of America's country sneeze. How to risk your life repeatedly and keep laughing. It's a good story.*

**\$1.50** postpaid

or WHOLE EARTH CATALOG



Drop City is a fucked-up mess, Drop City is completely open, completely free; I own it, you own it, because we know that all energy comes from the same place. Ten domes under the skydome, overshadowed by the Rockies; silverdomes, domes that are paintings, multicolored cartopdomes and one black dome.

Droppers live out the garbage dump. We know about garbage. The people of Trinidad call us Dump City—they know where it's at. They call Droppers when they want garbage picked up. It delights them to watch us rummaging around in the schmutz; it delights us too. An incredible number of people can live off the garbage heap of the U.S. Drop City is built on the garbage dump of a dying town of ten thousand strung-out coalminers. Think what can be done with L.A.—N.Y.—San Francisco—Des Moines—Dallas! The most beautiful place in Drop City is the dump, the garbage dump of the garbage pickers. It's our greatest resource.

Luke Cool taught Droppers to design domes, build solar heaters, make dwellings in which a family can live in comfort and beauty. Luke Cool is the king of the junkheap, teaching Droppers and the world how to USE things. Jump up on top of the car with an axe and chop 'em out, all around the edges just like a can opener, stomp, pop out the back glass, use it for a window, slip off the mirrors, use them for a solar cooker, pull out the insulation, use it, USE IT; make a honeycomb sandwich out of beer cans and plywood—fantastic strength—and USE IT.



So they had us, A.C.L.U. and all. But Curley and I couldn't resist going down to the welfare office for a final confrontation. We sat down with the supervisor and laid our heaviest rap on him about what welfare *really* means. That we're *all* on welfare, absolutely dependent on every other human being, plant, animal, earth, air, fire, water for our welfare and we'd fucking well better start looking out for our collective welfare or there isn't going to be any welfare to look out for.

As we put it on him, the supervisor's face got redder and redder. He started chomping and puffing his fat cigar faster and faster, and when we got up to leave, he was in a blind fit of rage. He began pounding his desk with both fists, bouncing and clattering pencils, pens, paper clips and ashtrays with every blow, and screamed like a little girl having a tantrum, "YOU HAVE NO RIGHT TO BE POOR!!!"

We fell out the door laughing hysterically.

And B, the moneyman. The hardest gig of all, the moneyman—everyone is always hitting on you. Your face disappears and is replaced by a dollar sign. Everyone is determined to help the moneyman on his road to enlightenment by relieving him of some of his material goods. The Droppers were no exception.

On a Christmas Ishmael wrote a play. All of Drop City was to be the set, all the Droppers would be the cast. It was gonna be good. Ishmael tacked a casting list on the bulletin board in the Complex. The Droppers were to choose their own parts, and they did. Every one accepted his role.

The hardest time in a commune, particularly Drop City, is the time after the building gets done. While everyone is working together on actual construction the energy is centered, there is fantastic high spirit, everyone knows what he is doing all the time. But after the building is done comes a time of dissolution. There's no focus for the group energy, and most hippies don't have anything to do with their individual energy.

Handling time, learning what to do with total leisure, is one of the most important lessons to be learned in a commune. What we do with our time is our choice; there's no compulsion to work or play or anything anymore. We have to learn how to really use time—every second—because if we decide to lay around on our asses, it isn't long before time gets heavy. Rebuilding a world is a full-time job, a continuous job. We've got to learn to be conscious of the Grast Work all the time.

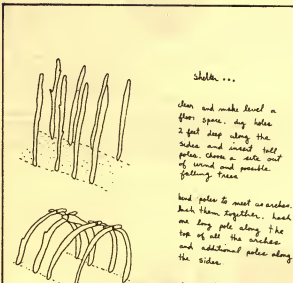
In a way the time of dissolution was good; a period of service. But instead of going higher, we were on the merry-go-round. Curley and Drop Lady left, Clard and Suzie left, John McHale said, "Who Pays For The Rain," and I suddenly realized what Curley had been trying to tell me all along: It's all free, it all flows from the Cosmic Forces, all energy comes from the same place and it's free — but I'd learned it too late. Instead of a community of people dedicated to getting it together on the highest possible level, Drop City became a decompression chamber for city freaks.

*this may well be the best book in this catalog*

if you are a person,  
it is for you.  
if you are a dog,  
for instance,  
and you can't read very well,  
it just might be for you too  
because of the drawings.

*she's our very own bradford angier.*

**\$3.95** postpaid

or **WHOLE EARTH CATALOG**

Shells ...

clear and make level a  
floor space. dig holes  
2 feet deep along the  
sides and insert tall  
poles. Choose a site out  
of wind and possible  
falling trees

bind poles to meet as arches.  
Join them together. Use  
one long pole along the  
top of all the arches  
and additional poles along  
the sides.

cover with a tarp or  
some plastic or an old tent  
or even a blanket.  
turn the cover under the  
bottom transverse pole  
(which is linked to the outside  
of the frame) and sew at  
top edge.  
if rain is imminent  
use with plastic with 2 feet  
extra on the sides. Dig a ditch  
around shelter and bury  
extra plastic at corners.  
Run off top and : rain 50



earthworms turn decay  
& waste into rich odorless  
humus earth. They are the  
best compost shredders going.  
To greatly enrich your  
garden's topsoil, set up  
a worm colony in your  
compost box. Keep it



moist & shade.  
Start with sifted  
dirt & well rotted  
organic compost  
and you will  
gradually get  
to where you  
can give them  
fresh organic  
garbage & they  
will take care of  
it. See the earth  
worms turn  
garbage into  
fertilizer.



winter heat:  
use 2 55 gallon  
drums. The  
lower one with  
door & grate in  
for the fire. The  
upper one simply  
holds the heat  
(has a damper  
to shut the pipe  
above), where the  
pipe goes through  
the roof, use a  
metal collar to  
protect from fire,  
elaborate stone caps  
on bricks).

ladybugs, praying mantids  
birds protect your  
garden from  
assault by  
insects.

horses have a lot to contribute to your garden. Just offer clean someone's stall and take a truckload home to your garden.

Love,  
Linda

Dear

Dear

She laughed at her role and her lines. Then she took a sip of Pepsi, turned to Divine Right and with a sad expression on her face told him about their Uncle Emmit, who was close to death at the homeplace in Kentucky.

lettu kishida runs the japan kibbuts association, 2-57 chome, akasaka, minato-ku, tokyo-to (runs it but watched over by financial godfather), tel. 03-583-1280; he speaks english, has ties on kibbuts in israel, helps run an exchange program where at least 100 japanese go to israel for kibbuts living each year, he has a list of kibbuts in israel, and can help arrange for foreigners to go to israel (and work and live) on these kibbuts; he has a list of envelopes, with international postage coupons would facilitate response. also some knowledge of japanese (sam marin's pocket book **easy japanese** and english-japanese dictionary helpful and cheap) before arrival is helpful. tsetu's wife, kyoko, wants to do a book on kibbuts, and has a list of kibbuts in israel, and has a source - and a japanese whole earth catalog would be really something! your friend, michael howden, san francisco

Japanese Communes  
Community



## Communes

I'd call this the hardest-working, most effective of the commune publications. More than others it fosters variety, it carries detailed reports from working communes, it gets into practical how-to information. It's British, with right worldly perspective.

—SB

## Communes

\$4.50/yr, \$7.50 annual

from:  
Commune Movement  
Box 141  
Westbourne Park Road  
London W11  
England

### Not an Escape but a Confrontation

In an amplifier negative feedback is applied to improve the stability and the quality. This is done by taking a sample of the output and applying it in opposition at the input. It is very effective and its only disadvantages are, it lowers the gain slightly and necessitates a feedback loop.

This may be used in analogy when considering the function of a commune in society. The aim is the betterment of society, the isolation from society is very relative and more geographical and cultural than economic.

When an individual becomes disenchanted with society he tends to become a floater, society waste, as he no longer contributes; he drops out. This dropping out allows a period of quiet, a first taste

of freedom—freedom from the duties imposed by without. Duties from parents, teachers, employers and society-in-the-mass. This kind of freedom is enjoyed for a while until further disenchantment occurs, being a limited freedom and realization of this brings about the discontent.

To enter into society once again in such a sensitive state would be self-sufficient and self-effacing. To do this is accepting defeat and once again to run with the herd resulting in a half-hearted way of life once again, but more conscious sorrow. The alternative is to form your own closed circuit of life-sustaining activity, to have a creative aim.

Not knowing how one can fit into society in a creative manner a further period of quietude is necessary, but one in which the struggle for survival doesn't become all encompassing. To do this one must become economically independent and the purest way to this end is to live without luxury, with sufficiency and no more. This can be done most effectively in a group and naturally in a group entering a similar search would be the ideal.

### A community.

Eventually people covering such a protracted project will mature into their own creative mood and a suitable mode of activity will surely result. Such an individual will then know his own most effective life-living waywardness and on returning to society will not be caught up in the swirl of events but will be able to produce real individual action, from within what he has created as himself, instead of outside influenced micro-patterns of society-at-large.

This is negative feedback, though its net result is positive.

A mental isolation provides positive feedback. As its small output reinforces the original input and causes excessive disharmonious action resulting in an unstable society of low quality.

## Modern Utopian Alternate Society

These two seem to just barely stagger along from issue to issue. *Modern Utopian* is American, somewhat theoretical, and occasional source of useful news from particular communes. *Alternate Society* is Canadian, somewhat political, an occasional source of useful news from particular communes. Both rely heavily on reprints.

—SB

### Modern Utopian

Dick Fairfield, ed.

\$10/yr (quarterly, plus other stuff)

from:  
Alternatives!  
P.O. Drawer A  
Diamond Heights Station  
San Francisco, CA 94131

### Alternate Society

Gary, ed.

\$5/12 issues

from:  
Alternate Society  
47 Riverside Dr.  
Welland, Ontario  
Canada

Perhaps the largest area yet to be settled in North America is Northern Ontario, comprising over 360,000 square miles of territory with a population of only a little more than half a million. Northern Ontario is as varied in terrain as it is large in size. Covering some 1000 miles between the Provinces of Quebec and Manitoba, and extending north from North Bay to James and Hudson's Bay, Northern Ontario is a land of tens of thousands of clear lakes, rugged hills of Precambrian rock, endless tracts of timber and an almost limitless freedom to exercise one's own abilities in creating a better life.

While much of Northern Ontario is unsuited to any kind of agriculture, being either too cold or rocky, numerous areas exist within Northern Ontario that offer excellent possibilities. One such area is NEAR NORTH. The "near north" or southern extremity of Northern Ontario is approx 300 miles wide, covering the distance from Ottawa River on the east to Lake Superior in the west and extending for 80 miles north and south of that line. Largely lowland, many tracts of good farmable land exist, and in some places, have been developed. The entire area is well served by all forms of transportation and has within its boundaries, one third of Northern Ontario's population.

Alternate Society

## Tentative Group

The Tentative Group has run into difficulties and no longer exists as a group.

## FISH-FARMING COMMUNES

This is a suggestion only, as yet, so I will open up the discussion of the ideal's value as I see it. There are three big factors: (a) For those interested in rural communities, reasonable arable land is or can be expensive—as we all know who owns the wealth and it ain't us—taking it off our own backs is a very real possibility. (b) There is something one can do quite cheaply (by comparison) in the meanwhile, as part of the process. (b) There is a world food shortage (or at least a "Third-World" food shortage) should go on for one of our own in Europe and import less from outside. (c) There are, in this country, many hundreds of smaller streams, still unpolluted on cheaply available semi-rural land ground (even near industrial areas) which with a series of small dams that would draw down a minimal amount of the natural environment, would make an excellent cooperative fishing industry. Fish ponds are very important in the food economy of thickly populated countries like China, Japan and India. If you go to those countries, you'll find that they don't believe in eating fish, the best fed part of the World are those who have access to large scale fishing resources, like Kerala in India, Coastal China, the Greek Islands and the sea-groing parts of Western Europe. The ancient Celts used to believe "we gods" lived in the sea and that to kill fish was a direct act of sacrilege; this belief died out, not only because of religious changes, but because human population increase meant that land resources available were inadequate for supporting it by themselves.

## Dune

*Dune* is rich re-readable fantasy with clear portrayal of the fierce environment it takes to create a community. The metaphor is ecology. The theme revolution, the hard-won return to balance.

—SB

*Dune*  
Frank Herbert  
1965; \$44 pp.

\$1.25 postpaid

from:  
Ace Books, Inc.  
1120 Avenue of the Americas  
New York, N. Y. 10036

or WHOLE EARTH CATALOG

"These things are so ancient within us," Paul said, "that they're ground into each separate cell of our bodies. We're shaped by such forces. You can say to yourself, 'Yes, I see how such a thing may be.' But when you look inward and confront the raw force of your own will you are unshielded, you see your peril. You see that this could overwhelm you. The greatest peril to the Giver is the force that takes. The greatest peril to the Taker is the force that gives. It's as easy to be overwhelmed by giving as by taking."

"And you, my son," Jessica asked, "are you one who gives or one who takes?"  
"I'm... at the fulcrum," he said, "I cannot give without taking and I cannot take without..." He broke off.

## New Alchemy Institute

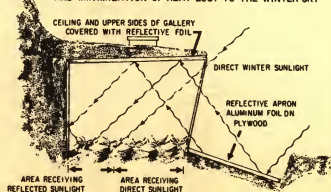
Here is a fantasy proposing to integrate solar heating, aquaculture, and agriculture in projects in New Mexico and the tropics. Technologically knowledgeable. The booklet probably costs something from:

The New Alchemy Institute, East  
Box 432  
Woods Hole, Massachusetts 02543

Fraser Darling, in his perceptive studies of remote Scottish peoples, showed how self-sufficiency was a positive force in their lives. The most independent communities were far more diverse and socially more resilient than the single industry towns and those heavily dependent on a life-line to the outside. He also found that they coped far better in their dealings with the world at large. Equally important, the independent communities cared for their environment and were less prone to despoil it for short term monetary gain.

## WINTER GARDEN GALLERIES

COMBINING SUNLIGHT CONCENTRATION, HEAT RADIATION, HEAT FROM DECOMPOSITION OF COMPOST AND MINIMIZATION OF HEAT LOSS TO THE WINTER SKY



Modern Utopian

## A Clue That Communes Are Real

Have you noticed that recent commune life in various areas of the U.S. is strongly reminiscent of Indian life in those places? The political Iroquois and Cherokees of the East Coast. The easy-going defenseless West Coast Indians. The structural, mystical pueblos of New Mexico.

—SB

## 181



## The Hidden Dimension

"Don't try to reform man," says Fuller, "reform the environment." This book took you to do it. Here is fascinating information on how we relate to space and each other through space. If you know how you want to feel and act, you can design a place to ensure that, or, equally, to make it impossible.

—SB  
[Suggested by Bernie Sproch]

### The Hidden Dimension

1966; 201 pp.

**\$1.95** postpaid

from:  
Doubleday & Company, Inc.  
501 Franklin Avenue  
Garden City, New York 11530

or WHOLE EARTH CATALOG

... To increase the speed of motorists in tunnels, it is necessary to reduce the number of visual impacts that flash by at eye level. In restaurants, libraries, and public places, cutting down on movement in the peripheral field should reduce the sense of crowding somewhat, whereas maximizing peripheral stimulation should build up a sense of crowding.

... The Aivilik have at least twelve different terms for various winds. They integrate time and space as one thing and live in acoustic-olfactory space, rather than visual space. Furthermore, representations of their visual world are like X rays. Their artists put in everything they know is there whether they can see it or not. A drawing or engraving of a man hunting seal on an ice floe will show not only what is on top of the ice (the hunter and his dog) but what is underneath as well (the seal approaching his breathing hole to fill his lungs with air).

... corner situations with people at right angles to each other produced six times as many conversations as face-to-face situations across the 36-inch span of the table, and twice as many as the side-by-side arrangement.



Although man is a self-domesticated animal, the domestication process is only partial. We see this in certain types of schizophrenics who apparently experience something very similar to the flight reaction. When approached too closely, these schizophrenics panic in much the same way as an animal recently locked up in a zoo. In describing their feelings, such patients refer to anything that happens within their "flight distance" as taking place literally inside themselves. That is, the boundaries of the self extend beyond the body. These experiences recorded by therapists working with schizophrenics indicate that the realization of the self as we know it is intimately associated with the process of making boundaries explicit.

In discussing olfactory messages with a psychoanalyst, a skillful therapist with an unusual record of success, I learned that the therapist could clearly distinguish the smell of anger in patients at a distance of six feet or more. People who work with schizophrenics have long claimed that they have a characteristic odor. Such naturalistic observations led to a series of experiments in which Dr. Kathleen Smith, a St. Louis psychiatrist, demonstrated that rats readily distinguish between the smell of a schizophrenic and a non-schizophrenic. In light of the powerful effect of chemical message systems one wonders if fear, anger, and schizophrenic panic may not act directly on the endocrine systems of nearby persons. One would suspect that this would be the case.

## Village Planning in the Primitive World

Successful small community design must fit the local physical environment and at the same time render clear the community's social system and its religious system. This book has 78 pictures and eight detailed written accounts of village systems that have worked for bushmen, Cheyenne Indians, Trobriand Islanders, the Yoruba, Mbuti pygmies, and others. The systems are diverse, compelling, and mind-opening for approaching the design of one's own community.

—SB



7. Reconstruction of Pueblo Bonito, Chaco Canyon  
Canyon National Monument, New Mexico



54. Plan of Matakam homestead, Cameroon,  
Africa.

## PLANNING AND CITIES

### VILLAGE PLANNING IN THE PRIMITIVE WORLD

DOUGLAS FRASER



### Village Planning in the Primitive World

Douglas Fraser

1968; 128 pp.

**\$2.95** postpaid

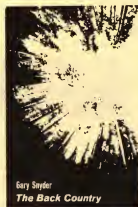
from:  
George Braziller  
One Park Avenue  
New York, New York 10016

or WHOLE EARTH CATALOG



20. Plan of ancient Cheyenne camp circle,  
Western Plains, United States

## Gary Snyder



Gary Snyder  
The Back Country



Gary Snyder  
Regarding  
Wave



Gary Snyder  
Earth  
House  
Hold

**The Back Country \$1.75**

**Regarding Wave \$1.75**

**Earth House Hold \$1.95**

from:  
J.B. Lippincott Co.  
East Washington Square  
Philadelphia, Pennsylvania 19106

or WHOLE EARTH CATALOG

21 August

Oiling and stowing the tools. (Artifact/tools: now there's a topic.)

When a storm blows in, covering the south wall with rain and blotting out the mountains. Ridges look new in every light. Still discovering new conformations—every cony has its own story but the rocks were just there.

Structure in the lithosphere/cycles of change in rock/only the smallest percentage sanded and powdered and mixed with life-derived elements.

Is chemical reaction a type of perception?—Running through all things motion and reacting, object against object/there is more than enough time for all things to happen: swallowing its own tail.

[Earth House Hold]

## REVOLUTION IN THE REVOLUTION IN THE REVOLUTION

The country surrounds the city  
The back country surrounds the country

"From the masses to the masses" the most Revolutionary consciousness is to be found Among the most ruthlessly exploited classes: Animals, trees, water, air, grasses

We must pass through the stage of the "Dictatorship of the Unconscious" before we can Hope for the withering-away of the states And finally arrive at true Communism.



If the capitalists and imperialists are the exploiters, the masses are the workers. and the party is the communist.

If civilization is the exploiter, the masses is nature. and the party is the poets.

If the abstract rational intellect is the exploiter, the masses is the unconscious. and the party is the yogins.

& POWER comes out of the seed-syllables of mantras.

[Regarding Waste]





Far-out is fine. Who's minding the store?

Gordon Ashby 1966

☐ I am...

☐ Someone else

## Community Market

A growing clearing house for communities practicing cottage economy. Serves as a mail-order catalog for the 36 groups listed. There are only a few noteworthy products, like hammocks, snowboards and papoose carriers, but there's an interesting variety of communities represented, from the Appalachian South Folklife Center to the Christian Home-Steading Community.

—Hal Hershey

## Directory of Community Market

\$0.25

from:  
Community Market  
P.O. Box 268  
Dorchester, Massachusetts 01342

## WOODEN TOYS: Made of Pine or Fir (non-toxic)

Painted Hardboard Inlay Puzzles 10" x 12". Flowers in the Sun ..... [32-L. \$5.];  
Farm Animals ..... [32-M. \$5.];  
Geometric Shapes ..... [32-N. \$5.];  
Word or Name—9 letter spaces per line/3 lines maximum. [32-O. \$5.]

TOLSTOY FARM, Davenport, Washington 99122

## Liberty House

One of the most thoughtful endeavors going: poor people from Mississippi, Louisiana, Florida, Georgia, Alabama, Africa, Mexico Guatemala and Canada making leather goods, bags, clothes, dolls, toys, basketwork, jewelry. It all seems to have a special hand-made quality.

—Hal Hershey

## Catalog

\$0.25  
from:  
Liberty House  
P.O. Box 3468  
Jackson, Mississippi 39207

Oven Glove: Real protection against burned hands, with a sense of humor. Well padded pockets cover both hands. Color: turquoise, yellow or red denim with multi-color lining. Indicate which. 36" long by 9" wide [21-F. \$4.95]

Hand Puppets: Frog, Fish, Rabbit and Mouse. For dramatic play. Made in sturdy denim for durability. Indicate which. 10" long ..... [21-H. \$1.25]

## Accounting For Everyday Profit

I do wish we'd had this invaluable book when we started business. Instead we fumbled around, lost track of things, invented procedures, got hints and requirements from Portia Institute, hired people with some experience, and after two years arrived at an excellent bookkeeping and accounting procedure which is just like what's in this book.

—SB

[Suggested by Francine Slate]

## Accounting For Everyday Profit

J. K. Lasser  
1970; 127 pp.  
\$1.45 postpaid

from:  
Simon & Schuster  
1 W. 39th St.  
New York, N. Y. 10018

or WHOLE EARTH CATALOG



... From earliest times, whenever men gathered together in a community, some form of accounting has been necessary. And as cities and nations grew, accounting became one of the invisible connective tissues that gives any society a functioning shape. ...



Twin Oaks Community, Louisa, Va., 23093,

## From Our Doll Shop

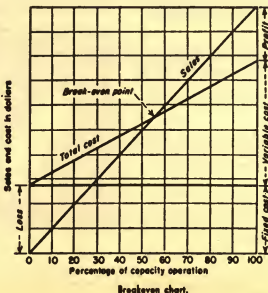
Dolls, completely hand-made in small home-style workshop, are stuffed with dacron polyester and guaranteed machine washable (except for clothes which should be hand-laundered separately). Each 10" tall. Indicate whether White or Negro desired. Price is same.

Girl ..... [4-A. \$5.50] Boy ..... [4-B. \$5.50]  
Extra Set of Clothes ..... [4-C. \$1.75]



CAMPBELL VILLAGE, U.S.A. Copake, New York 12516

ASSETS		LIABILITIES	
Cash on Hand	\$ 750	Accounts Payable	\$ 20,000
Cash in Bank	27,000	Notes Payable	15,000
Accounts Receivable	90,000	Taxes Payable	3,000
Notes Receivable	15,000	Mortgage Payable	70,000
Inventory	15,000	Bonds Payable	15,000
Machinery and Equipment	40,000	Total Liabilities	\$143,000
Land	20,000		
Buildings	195,000	Preferred Stock	\$ 50,000
Prepaid Insurance	2,000	Common Stock	200,000
Supplies on Hand	500	Paid-In Surplus	2,000
		Earned Surplus	38,000
		Total Capital	\$292,250
Total Assets	\$422,250	Total Liabilities & Capital	\$422,250



## The Moonlighter's Manual

Moonlighting means having a second job. Lots of people don't have a first job or want one. Birds of this feather flock economically together and pool resources for rent, food, dope, etc.—which still requires some modest income. Moonlight-type work may be the answer. Most of the income-sources in this book are part-time, or do-at-home, and involve low commitment of psyche (an advantage they have over stealing or dope peddling). The book includes a good list of technical training schools. —SB



## 300 Ways to Moonlight

Jerry Ladance  
1969; 176 pp.  
75¢ postpaid

from:  
Paperback Library  
215 Park Ave. S.  
New York, N. Y. 10010

or WHOLE EARTH CATALOG

## BE A LOCKSMITH

Picking locks, installing them, or making keys, freeing people from locked rooms, or getting them into their locked homes and cars, is an art that mystifies most people, thus making the locksmith in any town a respected craftsman. But actually, almost anyone who can work with tools and has a steady hand for dealing with tiny objects can master this craft and make a secure and profitable living from it. Generally this is a job for a self-starter, whether he pursues it full time or part time. The more than three hundred tools of the trade are the secret; they really do the work.

## Earnings

Some beginners report averaging \$3 to \$10 an hour in their spare time, while learning, and those who set up their own shops, either in their homes or in a small, rented downtown store, come closest to the higher figures. And it's almost 100 per cent profit.

## Hours

Variable. This job can be placed on a regular workday basis if you concentrate on installing and replacing locks and key-making, and there are always many jobs that can be done in spare time at home. But there will always be emergency calls, too, and these can mean an hour's rush work at any time of day or night.

## Requirements

If you can concentrate on simple diagrams, follow instructions and handle small tools, you can learn this trade quickly, studying in your free time at home and gaining practical experience by working with actual car locks, home locks, safe locks, and padlocks. You'll also need a car for transportation, of course.

## Future

Some large-traffic supermarket and department stores are glad to set up a locksmith with the space he needs, just for the service to their customers, although they will expect a commission or rent for their idea location. But if you set up your own shop is a distinct future calling, and you can double your earnings by selling locks, keys, and safety devices, too.

## For Information

Write Locksmithing Institute, Little Falls, New Jersey 07424

American Tuning School, Gilroy, California 95020.

Home study in piano tuning.

Anderson School of Scientific Massage, Princeton, Illinois. Professional message taught by mail; diploma awarded.

## Small Business Administration

The Small Business Administration publishes over 70 bibliographies that deal with differing business and functions. These can prove extremely useful to those people contemplating a part time store of their own and single copies are available free from the administration. Small Business Administration, Washington, D.C., 20416.

Mark McCain  
Salem, New Hampshire

38. Toys
39. House-to-House Selling
40. Laundry and Dry Cleaning
41. Mobile Homes
42. Bookstore Operation
43. Plumbing and Heating Job Shop

# HOW TO BUILD A MONEY RE-CYCLING DEPOT FOR \$300 OR

## DO YOU KNOW WHERE YOUR SAVINGS ARE TONIGHT?

Remember when they burned the Bank of America in Isla Vista, California? Well, they're burning it again in IV right now, only this time the Bank isn't going to be able to rebuild so easily. This time they're burning it legally, in fact they've got a charter from the federal government to do it — by forming a "credit union."

IV's Community Council has started the Isla Vista Community Federal Credit Union as sort of a money co-op. Members save there just as they would at a bank — their deposits earn dividends and are insured up to \$20,000. But instead of lending money to defense-disoriented conglomerates or agri-me-businessmen, the credit union makes loans only to its own members. The idea is to build up the economic vitality and self-sufficiency of the Isla Vista alternative community by creating a co-operative "people's bank."

Loans must be OK'd by a credit committee elected by the members. The money can be used for anything from buying a truck to defraying medical expenses to paying tuition to financing a tractor. There doesn't have to be collateral unless the loan is more than \$2,500. A brochure from the Credit Union National Association suggests what kind of loan criteria are used: "For a community credit union, making loans on character happens to be especially easy, because it is a friendly association of neighbors. The members know each other. They do not have to investigate each other... Hence, whenever a loan application is being considered, the members of the credit committee can concentrate on the question, 'Will this loan help the borrower?'"

And because credit union is a non-profit, tax-exempt association, it can make loans at easy-money interest rates. The IV credit union operates out of a corner of the Community Council's office. It pays its manager \$25 a week to keep office hours Monday through Saturday, two hours a day. In its first six weeks it signed up 120 members, with share deposits of \$25,000. About \$5,000 have been loaned out to members so far — one loan, for example, went to finance the inventory of a text-book co-op. Another was to help a member buy tires for his truck. The credit union is connected with the county welfare department to sell food stamps. The county pays IV's people's bank \$1.00 every time a member buys stamps! Eventually, the credit union's board hopes to do a bail bond service and finance co-operative housing.

The County-Economy seminar at the Free University of Berkeley, for which we co-ordinate, has formed an organizing committee to apply for a charter for a credit union of the members of the Free U. (Every credit union must be

## United Security Accounts

### WRITE CHECKS ON YOUR SAVINGS ACCOUNT EARN INTEREST ON YOUR CHECKING ACCOUNT

United Security Accounts is for real. Ask any banker. They all go tut tut and look envious.

—SB

United Security Accounts® are a combination of savings and checking accounts. Interest-bearing savings (4½%) serve as collateral for 15 to 45-day free check loans, with the obvious advantage that money spent is effectively earning interest. The accounts offer unlimited free checking with no minimum balance (a \$100 deposit is required to open an account but need not be maintained); in return, you have to watch out for a few tricky features. When the free loan period is up, a loan starts costing you 9%, retroactive to the writing of the check, and savings are not automatically withdrawn to cover it. You can withdraw savings and apply the money to the loan yourself, though you may lose several month's interest if you do; but the accounts are most satisfactory if you deposit enough each month to cover the previous month's checks. A deposit intended to cover a check-loan must reach the bank after the check has cleared; otherwise it goes to the savings account and the loan will remain outstanding. The checks come with an identification card and look quite distinctive. Probably as a result, they are almost as easy to cash as local checks.

The bank says the accounts are released in blocks and are not always available. I don't know how much trouble they may be to get (I had no wait at all). Don't send a deposit, just a letter of inquiry, to

Citizens Bank and Trust Company  
Chicago, Illinois 60648

Duane Small

Winnetka, Ill.

For as I can see, you've covered Everything but this:

This check is written on a checking account which provided free printed checks, free postage for deposits, free, complete monthly statements that anyone can understand and... get this, Maximum Savings Account Interest on my MAXIMUM account balance. All this plus Federal Deposit Insurance.

My account has been with them for years, and I won't tell you how much interest they've paid me for my Checking Account money! Top that!

George D. James Jr.  
Undellie, N.Y.

Officers of the Isla Vista Credit Union go over accounts. Left to right: J.C. Simmons (President of the Board), Rosemary McLeod (Chairman of Credit Committee), Mike Tejeda (Vice-President of Board and Chairman of Educational Committee), seated Merle Mercer (officer member).

formed among a group of people who share a "common bond" — work for the same employer, belong to the same church, labor union, fraternal, professional, co-operative or other association, live in the same community or neighborhood, etc. The class has laid out \$30 in fees, which will be reimbursed as soon as the credit union begins to wail. The class polled its 23 members and discovered that all together they had \$7,910 (11111) sitting in banks doing nothing so socially, morally, existentially, or esthetically justifiable — money that could be easily liberated and sluiced back into a community of friends and neighbors. This credit union will consolidate the economic resources of people who belong to the Free U. and use them to fund potentially self-sustaining co-operative businesses — an automobile repair service, for instance, and a dressmakers' co-op — by making loans to members. Ultimately it could serve as the clearing-house for a labor exchange that would make it unnecessary for us to be constantly handing each other government forms with numbers all over them every time the roof needs fixin'. The "People's Bank" founded by our anarchist friend Pierre-Joseph Proudhon in Paris in 1849 was, after all, designed to eliminate money!

There's one problem with credit union loans — they can only be made to members who are likely to repay — they aren't grants. The class discovered that Leopold's, Berkeley's non-profit record store, raised a \$2,500 grant for a legal defense fund during the Cambodia-Kent State crisis by asking people to pay a "voluntary tax" of 25 cents an album. The class has discussed the possibility of collecting a "voluntary tax" at the credit union — 25 cents per transaction, say — toward an "alternative community chest" that would be allocated by proportional vote of the membership to community institutions that won't be able to pay the money back, like the Free Clinic.

## Atlas Shrugged

Atlas Shrugged

Ayn Rand

\$1.75 postpaid

from:

New American Library

1301 Avenue of the Americas

New York, N.Y. 10019

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If you're interested in setting up a credit union as a focus for economic experimentation, write William A. Atkins, Credit Union National Association, 1617 Sherman Ave., Box 431, Madison, WI 53701. Atkins will load you down with literature and refer you to the local office of your state's Credit Union League, which will send a consultant to speak with your group and, after the cash begins to recycle, supply all kinds of technical help and logistical support. If you'd like to check out the Isla Vista Credit Union Newsletter, send a self-addressed stamped envelope to 970 Embarcadero Del Mar, Goleta, CA 93017.

While you're at it, we're putting together sort of an "alternative economy cookbook" that will include reports of how people are getting and spending without laying waste their powers. Are you involved in some kind of enterprise or other economic or post-economic behavior or thinking that is in the least bit counter-cultural, counter-economic, over-the-counter, under-the-counter or off-the-wall? If so, we'd like to hear from you:

Craig & Allison Karpel  
COUNTER-ECONOMY  
350 West 57th St.  
New York, N.Y. 10019



## A VERY DIFFICULT DAY

"Hello?"  
"Hello, Estelle? This is David Ray Devenport, the famous truth seeker. I'm calling to see if you or any member of your immediate family might have a truth to tell today."  
"Where are you?" asked Estelle.  
"Ah," said Dr. "A good question. A very good question. Right now I'd say I'm cruising at about ten thousand feet. And what's that? I say below me there, off to the right, nestled in a little cluster of twenty-one thousand dollar suburban houses on the outskirts of Cincinnati? Why, I do believe it's one of those hippie buses, painted up all garish and weird, surrounded by children and a smattering of curious adult on-lookers. But wait! That curious on-looker smudging the headlights with his flats. That's no adult. That's a kid! A two-hundred-pound, nine-year-old kid. And look! Oh my God! The kid! He's gone wild! He's beating the poor hippie about the head and ears, he's hitting him with a Pepsi Cola bottle. Help, help, someone! Someone call for help!"  
"Where are you?" asked Estelle.  
"Mum, I regret I cannot give you that kind of information. Heavy stuff is going on. Mad villains are everywhere. Insanity rules, and only a total clamp on all information will save the day. I can, however, reveal this much: my nine-year-old nephew is actually a dwarf with incredible supernatural powers. Only an hour ago, before my very eyes, right in my own hand, by god, he transformed a Pepsi Cola bottle into a turd. Imagine. A turd. I was awful. It was disgusting. And then, you'll never believe what he did next. There I am sitting in the back yard of this little twenty-one thousand dollar suburban home with a big piece of shit in my hand, and he says: 'you're going to have a car wreck. He lays this curse on me right there, he says, Mommy, now you are about to crash!' It's been really heavy, mem. I've really had a very difficult day."



## Understanding Foundations

It tells you some about how to raise money and a lot about where to look.

—SB

(Suggested by Larry McCombs)

### Understanding Foundations

J. Richard Taft  
1967; 205 pp.

OUT OF PRINT

McGraw-Hill Book Co.  
Princeton Road  
Hightstown, New Jersey 08520  
Manchester Road  
Manchester, Missouri 63062  
8171 Redwood Highway  
Novato, Ca. 94947



Perhaps the greatest, most time-consuming, and least productive activity among fund raisers today is random foundation door-knocking. Amateurs, especially, are guilty of this. But professionals, who should know better, are offenders too.

Everyone who has ever applied or is about to apply to a foundation for a grant wonders whether there is some magic formula for a successful application. If there is one, it is simplicity.

The desks of foundation officials around the country are piled high with applications characterized by verbosity, pomposity, and vagueness. Make your application short, simple, and clear, and it will stand out.

Most foundations have no standard form which applicants fill out. A good approach is a simple letter of one or two pages (even the most complex subjects can be boiled down to this length) or a short proposal accompanied by a covering letter of introduction. Sometimes it is worth calling a foundation first to discuss your project before going to the trouble of preparing a proposal.

Don't hem and haw on money. State figures and try to stick with them. If you need staff, you will need to pay them. How much? If you need office space and equipment, check out all before going to the foundation. If materials, transportation, or other items are involved, include them. If it is a one-time grant, say so. If not, make it a two-year, or three-year, or more, request. Foundation officials are money handlers and, as such, are most concerned with sound fiscal management. They cite poor financial administration as a key factor in grants rejection.

Every applicant wonders whether or not he should include endorsements in his proposal. By all means, if there are reputable people in the field who are familiar with your work, the organization, and its programs, endorsements are valuable. Foundations have a high regard for expertise. The backing of respected people puts a useful stamp of approval on any project.

After making your proposal or writing your letter, don't expect quick response. Most foundations are extremely busy and take a good deal of time before responding to letters or applications. Certainly do not expect an early grant. Foundations generally have board meetings several times a year, at which time those proposals which have passed the scrutiny of the executive director, the program administrator, or the person concerned with applications, are considered. It is infrequent that an applicant will receive funds in less than six months' time after his application.

## The Foundation Directory

The reference book of foundations. Gives addresses, finances, officers, purposes and activities. Foundations are listed by state, which is intelligent, since grants are usually given locally.

—SB



The Foundation Directory  
Marjanna O. Lewis, Ed.  
1967; 1198 pp.

\$12.00 postpaid

from:  
Russell Sage Foundation  
230 Park Avenue  
New York, New York 10017



On Getting by Without Money

Disassociation with the economic bag of any society is difficult unless you are very rich or a Trappist monk. This article is for those who have no savings, no inheritance, no trust funds and no desire to remain in a money-oriented rut (there are so many other ruts to explore).

What I have to offer here is not all-inclusive—just merely information that I have acquired firsthand as my family (wife and 2 kids) and I have tripped along.

When we first started on the trip, our first concern was food—a needless concern in this country—we went to the local grocery store and asked for the vegetable and fruit discounts. Everyday in this country grocery stores—all of them—throw away about 4 garbage cans full of edible food. Food that is 'spotted', 'overripe', 'bruised', or ugly. The quality and quantity of the throw-away food depends very much on the type of ownership of store and its clientele. One man operations or family owned stores keep everything—chain operated stores throw away good food all the time. The easiest way to get vegetables from a store is to ask for them. Sometimes you score, sometimes not. The store I got vegetables from gave me enough to feed 31 people, 10 chickens and start a good compost pile—2-3 boxes everyday. Stores catering to the elite of this society have the most throwaways—no blemishes or bruises allowed—but they tend to be selfish with their garbage. Stores like Safeway, etc. are best bets.

Another source of food is Government Surplus Food obtained from your local welfare office. In Santa Cruz County (Calif.), a married man with a child earning less than \$200 a month is 'entitled' to 20 lbs. of flour, 3 lbs. of oatmeal, 5 lbs. of corn meal, 1 lb of bulgar, 3 lbs. of rolled wheat, 3 lbs. of rice, 5 lbs. of butter, 10 lbs. of powdered milk, 3 lbs. of lard, 2 lbs. of dried peas, 1 lb. of peanut butter, 5 lbs. of cheese, plus canned vegetables, dried fruit and fruit juice—each month. These foods are

Many foundations have accepted the doctrine that their limited funds should be used chiefly as the venture capital of philanthropy, to be spent in enterprises requiring risk and foresight, not likely to be supported by government or private individuals. In their fields of special interest they prefer to aid research, designed to push forward the frontiers of knowledge, or pilot demonstrations, resulting in improved procedures to be widely adopted.

Support for current programs, if it comes at all from foundations, must usually be sought from the smaller organizations, and especially those located in the area of the agency, well acquainted with its personnel and its needs. Most small foundations, and some larger ones, restrict their grants to the local community, or state. Immense variety exists, the interests and limitations of each foundation need to be examined before it is approached.

Where there is evidence that the applicant has not bothered to find out the field of interest of the foundation, or has made a general mailing, the cost of such a formal declaration is scarcely warranted; wastebooks are available in any required size.

Sample listing:

San Francisco Foundation, The  
351 California Street  
San Francisco, California 94104

Community foundation established in 1948 in California by resolution and declaration of trust.

Purpose and Activities: Grants principally for welfare and welfare planning, hospitals, education, health and mental health, culture and the arts, and conservation in the San Francisco area unless otherwise specified by donors. Report published annually.

Financial Data (Year ended 30 June 1968): Active capital, \$6,736,824 (L), gifts received, \$68,287; expenditures, \$81,325, including \$639,793 in grants.

Officer: John R. May, Executive Director and Secretary.

Distribution Committee: S. Clark Beise, Chairman; Daniel E. Cushman, William W. Orick, Jr., Vice-Chairmen; William L. Hewlett, Treasurer; Christian de Guigne, Mrs. Alfred McLaughlin, Emmett G. Solomon.

Trustees: Bank of America, The Bank of California, Commonwealth National Bank of San Francisco, Crocker-Citizens National Bank, First Western Bank and Trust Company, Golden Gate National Bank, The Hibernia Bank, Pacific National Bank of San Francisco, United California Bank, Wells Fargo Bank.

good trade items—we traded for eggs and non-food items. —samples—made arrangements with a group living on a farm. They didn't 'qualify' for welfare food but had an abundance of barnyard stock. We traded. We had food, another made sandals. We traded. We had cornmeal, someone raised a lamb—we had meat, they had coal. The best way to trade is to give it all away—when it's time, it will come back.

Next to free food, you need cheap food. Most bakeries sell day-old bread—we used to get about 13 loaves of french bread and 5 dozen rolls for \$1.00. (This helped feed the chickens too.) Egg Ranches sell flats of eggs below market value—we got cracked eggs for less than 16 each (cheap enough to feed the dogs, along with the canned welfare meat). Also, farmers markets and flea markets are good places for cheap good produce. Most important of all—bulk purchases of wheat and rice are very wise investments.

Cheap clothes are available at the Goodwill, Army Surplus Stores, Rummage sales and Flea markets. Rent is the real bummer and we never solved it completely until we moved into our camper. However, rent can be lessened on a trade for rent basis. I got 3 weeks free rent in agreement to clean up the house I was moving into. One friend got a big house for 3 months in exchange for repairs. Another got a year's free rent—the first 6 months in exchange for repairs and the last 6 months in trade for a sculpture he did. With the camper, rent is not the problem it once was.

I built my camper for about \$125.00. I got nearly all of the lumber at the city dump and at construction sites [you could start a lumber company from their scrap pile]. The stove in the camper came from the trash can and I traded a window for the sink. The icebox was given to me. The \$13 foam rubber mattress on our bed cost \$5 at the Flea Market. Four of the five tires on my truck were free—I got them from behind the Santa Cruz County auto maintenance building. They use tubless tires and they don't repair them. They throw them away—it's covered by taxes. Service stations and department stores sometimes throw away usable tires.

Transportation is hard—mostly luck. I've been given 1 car, 1 truck and I bought an excellent running car for \$20 trade.

Medicine. In emergency, go to the county hospital, look for trade situations. I know of a dentist who did work at a vet or trade for long-haired cats. I've seen a veterinarian who worked at a Veterinary Hospital to pay for his dog's operation. Look behind the doctor's office. I found 700 tranquilizers at the dump.

Tools and furniture may be gotten at Goodwill, flea markets and rummage sales.

If you look around, you may be able to find a mechanic who will work for exchange of things other than money—there are lots of things you can do.

You don't have to be rich to drop out—but it helps.

Tom Duckworth

## On Free Money

From my limited experience, the realm of foundations and grants is one of the most cynical in the American economy. Generally when you approach a foundation they are friendly and half-reciprocal. They consider your project promising if a little naive, and they'd like you to write up a proposal on it. You spend a month learning how to write proposals and a month writing this one. They keep it six months. Your idea has died of dry rot. Then they request that you re-write the proposal to accommodate (whatever) and it might go through next time the board meets. Do this three times, and you have died of dry rot.

Most actual grants I know of were initiated by the donors, not the donees. The most effective way to get grant money is to be Highly Visible.

I don't know why foundation and government money is so often toxic to projects. Maybe because the process becomes so easily dishonest. Do me no favors, and I'll tell you no lies. Or is it the belief that there's such a thing as a free lunch that is the root lie?

—SB

## Organic Shopping Guide

Rodale Press has compiled a comprehensive list of Organic Food Sources in 48 states and Canada, and complemented it with essays on the state of natural foods today, safe detergents, and other juicy lists of sources for natural fertilizers, ecology action groups, and organic gardening groups.

—Hal Hershey



### The Organic Directory

Jerome Goldstein and M.C. Goldman, editors  
1970; 116pp.

\$1.95 postpaid

Rodale Press, Inc.  
Emmaus, Pennsylvania 18049

or WHOLE EARTH CATALOG

### NEBRASKA

Brownville Mill  
Brownville 68311

Nebraska Pesticide Co.  
P.O. Box 100  
S. Omaha 68107  
Phone: 731-4200

### KENTUCKY

Clay W. Stille  
130 N. Harrow Ave.  
Lexington 40502  
Phone: (606) 246-8066  
Fertile organic compost maker. 100% organic liquid compost concentrate.  
Sells retail, wholesale, mail out-of-state shipments.

### IDAH0

Carl C. Bruteaman  
Beck 8192  
Phone: 462-3704  
Fertile organic compost.  
Eggs. No shipping.

## 7th Day Adventist Organic Food

COLLEGE DALE DISTRIBUTORS, is run by seventh day adventists, very nice people and their whole sale list. I haven't used it personally, but I do shop at their retail outlet and am very pleased with their service and quality of merchandise. A really nice thing about these people, is that health foods is a part of their religion, and their retail outlets in this area are really mind busters. Aisles of good food, all at reasonable prices, and without the stench of hypocrisy that came up here to live several years with a little house and a back yard on the outskirts of town, and coming from Hong Kong did not know the various ways of gardening here in the US, and it was the Seventh Day Adventists that taught him organic gardening. They have a restaurant near this whole sale outlet where we eat occasionally and they are very nice.

Bruce Rodarmor  
Sewanee, Tenn.

That's right.

—SB

Write to:

Collingdale  
Tennessee 37315

## Feed is cheap food

Items such as brown rice, whole wheat flour, wheat germ, cracked wheat, rye flour and dried beans are available at most supermarkets, but they are cheaper at farmers' co-ops and feed and seed dealers. To locate one of these outlets, check the yellow pages under headings Feed Dealers, Seed Dealers or Grain Dealers.

Here's a comparative list of prices obtaining now in the Pacific Northwest. Obviously availability and pricing will vary locally and regionally.

Item	Supermarket price per pound	Feed Dealers' price per pound
Brown rice	25¢	18¢
Wheat germ	60-75¢	20¢
Whole wheat flour	14¢	10¢
Rye flour	14¢	10¢
Pinto beans	25¢	10¢
Small red beans	17¢	17¢
Large red kidney	33¢	33¢
Split peas	21¢	17¢
Pearl barley	25¢	14¢

Marilyn Thompson  
Eugene, Ore.

## Foods by Mail

Sources for foods that are not treated with DDT, fumigants, etc. Most of these outfits are family affairs, and dedicated to supplying customers with real foods, mostly by mail.



Arrowhead Mills, Inc.  
P.O. Box 866  
Heresford, Texas 79045

Deaf Smith County, Texas, is a mineral-rich area that produces wheat with high amounts of protein. The best wheat available. 50 lbs: \$3.75 plus postage.

Case of 12 two lb. Cracked Wheat Cereal.....	54.00
Case of 12 two lb. Whole Wheat Flour.....	4.00
Case of 10 five lb. Whole Wheat Flour.....	4.00
Case of 2 twenty-five lb. Whole Wheat Flour.....	6.00
Bag of fifty lb. Whole Wheat Flour.....	4.00
Case of 12 two lb. White Corn Meal.....	4.00
Case of 10 five lb. White Corn Meal.....	4.00
Case of 2 twenty-five lb. White Corn Meal.....	7.00
Case of 10 five lb. Yellow Corn Meal.....	7.00
Case of 2 twenty-five lb. Yellow Corn Meal.....	6.00
Bag of fifty lb. Whole Soybeans, Canned.....	5.00

Arrowhead Mills

Ted A. Whitmer & Son  
Bloomfield, Montana 59315

100 lbs: \$7.50 plus postage.  
By the truckload, in bulk: 6 cents per lb.

Erehwon Trading Company, Inc.  
342 Newbury Street  
Boston, Massachusetts 02115  
or  
8003 Beverly Boulevard  
Los Angeles, California 90048

Good source of natural foods for the East Coast.  
Free brochure.

Erehwon ships out by truck, UPS, and other means, but does not mail order. Bulk orders are best to get wholesale prices.

El Molino Mills  
3060 West Valley Blvd.  
Alhambra, California 91803  
Has good wide selection (catalog free)  
and a good \$1 cookbook.



Jaffe Brothers  
28560 Liliac Rd.  
Valley Center, CA 92082

Cheap, good nuts, seeds, dried fruit. Also organic lemons, oranges, and avocados (10 lbs. for \$4).

The Food Mill  
3033 MacArthur Blvd.  
Oakland, California 94602  
Large stocks of bulk foods. Gallons of avocado honey, fresh peanut butter. Free leaflet.

## Brown rice again?

I think it would be good for catalog readers to know where to buy Koda Brothers brown rice—by far the best grown in the U.S. and costing only \$12.20 per hundred pounds. We use only this brand at Tassajara:

Namras and Co.  
429 Beale Street  
S.F., Calif. 94105  
or  
Mutual Trading Co.  
431 Crocker Street  
L.A., Calif. 90033

Erehwon  
342 Newbury Street  
Boston, Mass. 02115  
or  
8003 Beverly Blvd.  
Los Angeles, CA 90048

These addresses are for wholesale only.  
Mottel Sugar & Bakers Products, Inc.  
451 Washington Street  
New York, N.Y. 10013  
Japan Food Corp.  
11-31 31st Avenue  
Long Island City, N.Y. 11106  
Infinity Foods  
171 Duane Street  
New York, N.Y. 10013  
L.E. Robert Company  
792 Union Street  
Brooklyn, N.Y. 11215

Take Care,  
Bill Shurtliff  
Zen Mountain Center  
Carmel Valley, Calif.

Walnut Acres Mill & Store  
Penns Creek, Pennsylvania 17862

Best, most reputable source in the United States. Foods like you've never tasted: unrefined corn germ oil, raw peanut flour, creamed papaya juice. If you can order with friends, bulk orders are economical. Free catalog.

## FLOURS, GRAINS, SEEDS

ALFALFA SEED — (for growing or tea)	10 lb.	5 lb.	5 lb.	1 lb.
Alfalfa Powder — carefully dried	5.70	4.90	3.00	1.05
Alfalfa Leaves — for tea (see Beverages)	15.50	6.80	4.17	1.45
ANISE SEED —	9.90	5.00	3.09	1.07
ARROWROOT STARCH —	2.80	2.95	1.86	.66

BAKING POWDER, BAKING YEAST — please see Non-Conforming Items, Page 16

BARLEY, whole, hulled, for soups	2.20	1.15	.70	.30
Barley Grits, medium - soups or cereals	2.70	1.40	.95	.35
Barley Flour, excellent for baking	2.80	1.45	.96	.36
Beans - seeds for Sprouting	20	20	20	20

15 packets of a variety of seeds — radish, mung beans, green soybeans, red clover, fenugreek, sesame seed, oat grains, buckwheat — to mention a few!

Walnut Acres

Some sources of organic food by mail that we don't know much about yet.

Green Acres Organic Foods  
1338 Westheimer  
Houston, Texas 77006

Old Town Natural Foods  
174 Bridge  
Las Vegas, New Mexico

Ombilical Cord  
611 N. Blackstone  
Fresno, CA 93701

—Lloyd Kahn, Hal Hershey, SB



## THE DIFFICULT DAY CONTINUES

"It sounds like it," said Estelle.  
D.R. asked Estelle what kind of day she was having.  
Estelle thought it over. "Kind of thoughtful," she said.  
Kind of thoughtful, eh? said D.R.  
"Yeah," said Estelle. "I've been doing a lot of thinking."  
D.R. asked her what she'd been thinking about.  
"Different things."  
D.R. asked her to tell him about one of them.  
"I guess I've mainly been thinking about us not stopping in Vincennes last night," she said. "Do you remember that?"  
"Where?" asked D.R.  
"Vincennes. I wanted to stop and get a meal, and rest some. I wanted to take a bath, sleep in good bed, we talked about it, do you remember?"  
"Sure," said D.R. "I remember that. That was in Vincennes."  
"Well," said Estelle. "That's what I've been thinking about."  
"All day?" D.R. asked.  
"Just about," said Estelle.  
"What have you been thinking about that for?"  
"I don't know," said Estelle. "I guess I just really wanted to stop at a motel in Vincennes. I guess I was just awfully disappointed that you didn't want to, and it's just stayed on my mind."  
"I'll be damned."  
"You'll be what?" asked Estelle.  
"Damned."  
"Damned, did you say?"  
"Yep," said D.R. "I'll be damned."  
"What else will you be besides damned?"  
"I don't know," said D.R. "What else is there to be?"  
"Quite a lot of things, actually," said Estelle.  
"Well," said D.R. "Don't tell me about them."  
"I want to go to," said Estelle.  
"Yes you were," said D.R. "But don't. I don't want to hear about it."  
Estelle asked D.R. what he did want to hear about.  
"I don't want to hear about a goddamn fucking thing."  
"Well, I guess the thing for me to do is hang up, then," said Estelle.  
"Where are you, a phone booth?"  
"I'm at the ticket counter, D.R. you paged me, remember?"  
"Are there people around?"  
"A few."  
"Can they hear you?"  
"Probably."  
"There are people around me too," said D.R. "But they can't hear me, and I fucking well can't hear them, and I like that very much."  
"Are you in a phone booth?"  
"I'm in a fantastic phone booth."  
Estelle said, "Well I'm not. And I think I'm probably disturbing the ticket man, although he is certainly being very nice about me using his phone. So I guess what I'm going to do, D.R. is hang up now, and if you come down here after while I'll see you. Okay?"  
"That sounds about right."  
"Well goodbye then."  
"Yeah. So long, Estelle."  
"Goodbye, yeah," said Estelle.  
D.R. sat in the booth a long time, listening to the dial tone.



## Protein

**Nutrition for humans is primarily PROTEIN. People short on it get sick and despondent. And dead. In the big picture there's a shortage of protein. Here are two sources.**

**Meals for Millions puts out a powdered protein that works as a supplement or additive.** —SB

Modern Protein Food  
1800 Olympic Blvd.  
Santa Monica, CA 90404

**Instant Protein (which is 80% protein). FDA won't let them sell in larger lots than one pound.**

1/4 lb. and cookbook \$1.25 postpaid  
1 lb. can \$3.00 postpaid

from:  
A. G. A. Inc.  
Marine Biochemicals and Drug Division  
70 Oak St.  
Norwood, N. J. 07048

**"Instant Protein" the first FDA-approved food grade fish protein concentrate to appear on the market will be available to household consumers in mid-May.**

Alpine Geophysical Associates, Inc., manufacturers of Instant Protein say they plan to market the product initially in New York and New Jersey supermarkets, and branch out into New England later.

The light colored powder has only a faint aroma of fresh fish, its makers say. Blended with many foods, it adds no fish flavor, but fortifies them with animal protein at a low cost per serving.

Consumer testing of Instant Protein has shown that it blends successfully with flour products, such as cakes, breads, rolls and cookies, and with rice products. Mixed with these materials at about the ten per cent level, it produces almost no change in basic cooking characteristics. In most cases, all that is noticeable is a slightly intensified color.

The powder can also be added to a basic spaghetti sauce, its makers say, to produce meat-type sauce stock that provides about half a person's daily animal protein requirement for around six cents.

John McLaughry  
Lyndonville, VT

## The Fish Protein Story

Dear folks:

A reply to reader Don Symons (January, p. 48).

Fish protein concentrate has a long and dismal history. It was invented by an elderly, idealistic scientist, Dr. Ezra Levin of the VioBin Corporation, Monticello, Illinois, who thought he had a handle on curing the protein deficiency problems of the world.

FPC uses trash fish, entrails and all. After a patented process of chemical washings, the product is a gray odorless tasteless powder that lasts forever without refrigeration, contains a very high percentage of animal protein, and is cheap cheap compared to the protein equivalent price of beef, say.

Unfortunately, an unholy combination of Dr. George Larrick, then (1955) administrator of the Food and Drug Administration; Hoard's Dairyman and other milk producers interests; and midwest wheat growers, fearing its use as an additive to breads, etc. branded the stuff "filthy" and unfit for an FDA identity standard. Four years of political battles followed, involving the National Science Foundation (or Academy of Sciences), Bureau of Commercial Fisheries, Interior Secretary Udall, etc.

I think the Catalog is great. I may be the only right wing nut who thinks so. Up here I am viewed as sort of a combination Paul Goodman and Max Rafferty, if you can figure that one out.

Yours,

Rep. John McLaughry  
Jeffersonian Republican, circa 1790  
House of Representatives  
Montpelier, Vt.

Fish protein concentrate, once heralded as the big weapon in the war on hunger, remains an illusive dream despite the best efforts of Government and private business to produce it commercially.

About two months ago the Agency for International Development quietly canceled a \$900,000 contract with the Alpina Geophysical Corporation to produce 970 tons of the flour-like food additive for Biafra and Chile.

Contract penalties of \$6,000 a month were running against the producer when it proposed termination late in November.

The feasibility of commercial production of the odorless and tasteless additive made from whole fish and with a protein efficiency ratio of 80 per cent had been demonstrated in the laboratory of the Interior Department's Bureau of Commercial Fisheries at Battville, Md., about five years ago.

But bad weather and worse luck plagued Alpina from the contract signing in the fall of 1968 until its termination. Severe winter storms throughout New England delayed the delivery and installation of new equipment at the New Bedford, Mass., plant for three months.

A short harvest of Atlantic hake and hake-like fish then pushed up the price of the raw product to double the level expected. Finally, most of the ultimate product did not measure up to the standard set in the contract specifications. By that time it was Nov. 1, after which hake is not available.

Still, Alpina is not thinking of giving up. It hopes eventually to realize something from its \$3-million investment. With the aid of Federal and university scientists the company is now trying to discover what went wrong with its process. Only 70 of the 265 tons of the concentrate inspected could pass the test of contract standards for protein efficiency.

The New Bedford plant was closed a month ago but will reopen Feb. 1. By that time Alpina hopes to have a solution to the problem of lack of uniformity in the separate batches produced by the same process.

from:  
The New York Times, Jan. 15, 1970  
sent in by Herb French

## Insect-Food

Re: Recipes for eating insects.

This recipe comes from parts of Asia and Africa. Insect fried peanuts into crickets' abdomens (preferably cleaned). These prepared crickets are then fried. They are supposedly very tasty to those whose palates accept them.

James Do (J.D.)

On page 48 of your July catalog, "J.D." asked for recipes for eating insects. I found this one in *Science Digest* for June, 1970, page 21. That's volume 26, number 6. I quote:

1 pint termites  
1 Tablespoon vegetable oil  
½ teaspoon salt

Remove termite wings, if any. Spread termites on stone to dry in sun. Put oil in pan and spread dried termites on it. Toast over hot coals until almost crisp. Sprinkle with salt.

"It helps the flavor, say those who have tried the recipe, if you eat the termites in handfuls."

*Science Digest* credits the Bantus with this recipe and reminds readers that there is "lots of vitamins B" in termites. Termites aren't all that plentiful in most of the U.S., but I suppose that the recipe would be just fine for ants.

Frank Walsh



## Grasshopper Jam?

There's a bright side in the battle against the bugs, which is one from in the larger war against pesticide pollution and worldwide hunger.

"If we can't beat 'em, we'll eat 'em," chortles predicts Dr. Howard A. Schneiderman, dean of the school of biological sciences at the Irvine campus of the University of California.

"In the event we start to lose the battle, the war itself is not really lost," he says. "For insects are themselves an excellent source of protein... Eating bread fortified with insect meal (is) no different than eating bread fortified with fish meal."

Protein-wise, that is.

This is not a recipe, per se, for insects but it does imply that insects are very good and could be used to eat probably should be used to eat!

Pam Neubury

## Perma-Pak

The best source we've seen for storable foods is this outfit in Utah which caters to keep-a-year's supply Mormons. The prices look remarkably good on a wide range of stuff from brown rice (\$14.95/100 lbs) to crispy chips of spun vegetable protein (\$44.95/25 lbs). They have a "Year's Food Supply" deal for \$189.95 (360 lbs., FOB Salt Lake City).

—SB

[Suggested by Gary Snyder]

## Catalog

free

from:  
Perma-Pak  
40 East 2430 South  
Salt Lake City, Utah 84115

## CRISIS KITS

CHOW BELT, complete	12 lb.	3.95
FAMILY CRISIS KIT (See Complate	18 lb.	16.95
KARRY-KIT	order list for	8.50
TRI-SUPPLY	Kit refills.)	28.95
TWO-DAY FOOD SUPPLY	2 lb.	1.50
Perma-Pak		Total 7

## Calorie Cost Table

Dear Friends,

You might be interested in my latest creation, **Calorie Cost Tables**. It is based on the data in *Composition of Foods* and *Panoramic Acid*, Vitamin B<sub>6</sub> and Vitamin B<sub>12</sub> in Foods, but the data is presented in a different way. The tables give the number of calories of a given food one would have to eat to get 70 grams of protein, the number of calories for 800 mg. of calcium, etc. The idea is that the number of calories one eats per day is nearly four times that of a food with lots of vitamins and lots of calories may not be as good as a food with less vitamins and very few calories. In addition since one food may be fairly rich in many nutrients and another may be very rich in one but poor in others, I have given a single "overall" figure to facilitate a general comparison of foods.

The low calorie costs of vegetables have induced Irene and me to move in the direction of vegetarianism. For those who have gone further in this direction the vitamin B<sub>12</sub> columns should be of special interest. Since vegetarians eat vegetables, the number of calories often have a deficiency. The strict vegetarians who avoid even milk and eggs are really in trouble unless they take a B<sub>12</sub> pill.

We plan to sell the tables at \$3.

Craig Schensted  
2327 Easy St.  
Ann Arbor, Michigan 48104

## Composition of Foods

Since natural food does not come with a list of ingredients on the label, the Department of Agriculture has kindly prepared this authoritative analysis of everything edible. If you're serious about nutrition, it's a buy. —SB

[Suggested by Tassajara Zen Center]

## COMPOSITION OF FOODS

new  
expanded  
revised

Composition of Foods  
Bernice K. Watt and Annabel L. Merrill  
1963; 190 pp.

\$2.00 postpaid

from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

or WHOLE EARTH CATALOG

## NUTRIENTS IN THE EDIBLE PORTION OF 1 POUND OF FOOD AS PURCHASED

Food and description	Refuse	Food energy	Protein	Fat	Carbohydrate	Calcium	Phosphorus	Iron	Sodium	Potassium	Vitamin A	Thiamine	Riboflavin	Niacin	Ascorbic Acid
	Percent	Calories	Grams	Grams	Total Grams	Mg.	Mg.	Mg.	Mg.	Mg.	Int'l Units	Mg.	Mg.	Mg.	Mg.
Cake mixes and cakes baked from mixes—continued															
Mix, dry form	0	1,928	22.2	61.2	342.9	590	1,225	4.5	1,728	853	Trace	0.13	0.14	2.0	Trace
Cake, made with eggs, water, boiled white icing	0	1,501	20.0	39.5	281.2	364	776	3.6	1,175	553	410	0.10	0.38	1.0	Trace





## Joy of Cooking

Adele Davis and Ohswave to the contrary, I'm of the school that dietary schemes are out-front paranoia. A healthy mind insures a healthy body & vice versa; and what's needed more than special diets are common sense and good cooking. No food badly prepared is good for you. If you simply insist that all you eat is fresh, unpoisoned, and well prepared, the vitamins and proteins will take care of themselves. Rombauer's Joy of Cooking is the American bible of food & is essential in any household where food is enjoyed. Not only are her recipes enjoyable, but she goes into the basic structure of food & food preparation techniques that give the novice a good idea of what's happening in the kitchen.

[Reviewed by Johan Mathiesen,  
Suggested by Charlotte A. Wolter.]

Joy of Cooking from:  
Irma S. Rombauer, Inc.  
Merion Rombauer Becker  
1931 ... 1967; 849 pp.  
\$6.95 postpaid or WHOLE EARTH CATALOG

A new therapy for the treatment of small burns about the hands is to plunge the burned area into cold water.

Climate and age also change protein requirements. The colder the climate the greater the need. And no matter what the climate, growing children, pregnant women and nursing mothers need a larger proportion of protein than the average adult.

Cooking in mountainous country is an art all in itself. If high altitudes are new to you, watch for the high altitude cooking symbol which will give you formulas for adjusted ingredients or temperatures.

## ABOUT HERBS

Confucius, a wise man, refused to eat anything not in season. Everyone who has tasted the difference between food served with fresh rather than dried herbs knows how wise he was. Few herbs can be bought in a fresh state at market, but the most important ones can be easily grown in a small sunny plot. We know, for we have grown and used all the culinaris in this section. Therefore, we beg you to exercise your green thumb at least on those whose evanescent oils deteriorate or almost disappear in drying. Chervil, borage, burnet and summer savory suffer the greatest losses. And those mainstays—chives, tarragon, parsley and basil—can never in their dry form begin to approach the quality of their fresh counterparts. Even the flavor of sage when fresh can be so delicate as to be almost unrecognizable.

## Fannie Farmer Cookbook

Fannie Farmer is considered by many to surpass Joy of Cooking in the quality of its recipes. It's not quite as comprehensive. It is printed in paperback. —SB

[Suggested by Cappy McClure and Lois Brand]

Fannie Farmer Cookbook  
1896 ... 1965; 648 pp.

\$1.50 postpaid from:  
Bantam Books, Inc.  
866 Fifth Avenue  
New York, N. Y. 10019

or WHOLE EARTH CATALOG

Certain vegetables and fruits should not be stored together. Apples give off an ethylene gas that makes carrots bitter, for example, and onions hasten the spoilage of potatoes. Watch for such relationships. Do not wash vegetables until you are ready to use them because they do not soak them, except as indicated, because moisture tends to leach away the water-soluble vitamins.

If you are willing to cut down on refined starch and sugar items, especially fancy baked goods, bottled drinks and candies, a higher percentage of the diet dollar will be released for dairy products, vegetables and fruits. Do not buy more perishable food than you can properly store. Use leftovers cooked, preferably. To reheat them with minimal loss, see page 139.



## Purefoy Hotel Cookbook

My thing about cooking—I'm letting you in on something that your conscience MUST compel you to share.

Several years ago I was browsing through the high-priced cookbooks in a large Department store. In several expensive books on Southern cooking I found most of the better recipes were credited to the "Purefoy Hotel Cookbook." My mother is from Alabama and I knew she had the original. I wrote to the man who in Alabama wherein it originated to see if there were any old copies around. Ho! The little unassuming classic is not for \$10-20 but \$3.25 from:

Mrs. Robert P. Purefoy  
P.O. Box 98  
Talladega, Alabama 35160

This book is the real thing and if you ever wondered what happened to old-fashioned cooking and household knowledge—it's in this little book. This is the Old South, meaning fancy cleaners (but plenty) weren't available and "store bought" goods are limited. Included hints on cleaning, saving, making wines, etc. and has the rather unusual virtue of being authentic. Also excellent tips on state removal—great for those of us who can't or won't just throw away and replace.

One note—the basic ingredients called for are generally "unprocessed," e.g., hams. The hams in the book refer to hard "country" hams, now considered a luxury. [By the way—for those who are interested in raising everything—the Old South, everyone didn't have a smokeshouse. Hams and bacon were often "plans," i.e., sugar cured. They were rubbed down daily with a 50/50 sugar salt mix and shelved for air to circulate until almost hardening. After each rub—sprinkle well with pepper.]

Also: The Joy of Cooking I suggest that people try to find old editions, preferably WW II vintage. The recipes include many extras on saving money due to rationing. Besides, it's cheaper used.

Jerry & Maria Merchant  
Tampa, Fla.

## INDIAN CORN STEW

- |  |   |
|--|---|
| 2 medium onions, chopped fine          | 1 medium can tomatoes                                     |
| 1/2 green pepper, chopped fine         | 2 teaspoon sugar  |
| 2 tablespoons butter                   | 1 teaspoon salt   |
| 1 pound ground beef                    | 2 tablespoons flour blended with 2 tablespoons cold water |
| 1 No. 2 can whole kernel corn (2 cups) | 1 can cream of tomato soup                                |

Cook onion and green pepper in frying pan with butter for 5 minutes. Add meat and allow to brown well, stirring frequently. Add corn, soup, sugar and salt. Simmer for about 15 minutes, stir in blended flour and water, cook for a few minutes and then serve. This is a very delightful luncheon or supper recipe. Serve together with a mixed fruit or vegetable salad.

## PUREFOY FRIED CHICKEN

1 1/2- to 2-pound chicken is nice size to fry. Pick, wash and cut in pieces the size you wish. Salt and pepper a few minutes before frying in order for the seasonings to go through.

Have your fat hot but not so that chicken will scorch easily. Dredge in flour, piece by piece (do not let it lie in flour as that will make it gummy) and fry nice and brown, turning it twice while it is cooking.

Fry chicken in a heavy iron skillet with a tight fitting lid. This holds the steam and cooks it better. Any good grade of vegetable shortening will do. Have fat deep enough to cover about half the chicken.

## HOMEMADE SOAP

Melt 5 lbs. fat and strain through cheese cloth. Dissolve 1 lb. can of lye in 1 qt. cold water and let stand until cool. Add fat slowly, stirring constantly. Mix together 3 tablespoons borax, 1 teaspoon salt, 2 tablespoons sugar, 1/2 cup cold water, and 1/4 cup ammonia. Add to first mixture. Stir all until thick and light colored. Pour into pan lined with cloth. Mark into bars before soap comes hard. When hard, break pieces apart and pile so soap may dry out well.

## TO SHARPEN MACHINE NEEDLE

When sewing machine needle becomes dull, just sew across sandpaper several times and result is a sharp needle.

## A TIP TO CANDLELIGHT LOVERS

Place your candles in the refrigerator for about 24 hours before you intend using them. This will keep them from burning down so fast or dripping so badly.

## POTATO PANCAKES

Grate and drain

2 medium-sized raw potatoes

Add

1 tablespoon flour or 2 table-

spoons cream, sweet or sour

1 egg, beaten light

Grated onion or onion salt to taste

Stir well. Cook by spoonful in

hot bacon or other fat

turning once. Or cook in one

high cakepan. Serve with meat,

Applesauce, cranberry sauce or

to spoon over the pancakes.

Serves 4 or 5.

## POPOVERS

A perfect popover is crisp on the outside, tender and moist inside. The secret of success is simple—do not overheat the batter, and be sure the popovers are thoroughly baked when you take them from the oven. Test one to be sure.

Set the oven at 450°. Butter muffin pans or glass or pottery custard cups. Beat until light

- Add
- 1 cup milk
  - 1/2 cup salted melted butter
  - 1 cup all-purpose flour
  - 1/2 teaspoon salt

Beat until evenly blended (30 seconds in an electric beater). The batter should be like heavy cream. Add more milk if necessary. Pour into the pans, having them 1/4 full. Bake 20 minutes. Reduce the heat to 350° and bake about 20 minutes longer. Makes 8 to 12.

Bacon Popovers. Add to the batter 1/4 cup crumbled cooked, crisp bacon.

## CREAM OF PEA SOUP

If the peas are very young and tender, cook a few pods with them.

Cook together for 5 minutes

2 tablespoons butter

1 tablespoon chopped onion

Add

2 cups fresh or frozen peas

1/2 cup milk or cream salt

1 teaspoon sugar

Cook until the peas are soft

(about 20 minutes). Put through

a sieve or whirl in an electric

blender. Add

1 cup top milk or milk and cream

Heat slowly. Season to taste

with

Garlic salt or mace

Pepper

Sprinkle with

Chopped parsley

Serves 4

## PEANUT BUTTER COOKIES

Set the oven at 350°. Cream to-

gether

1/2 cup butter or margarine

1/2 cup peanut butter

Beat in

1/2 cup brown sugar

1/2 cup white sugar

1 egg

1/2 teaspoon vanilla

1/2 teaspoon salt

1/2 teaspoon baking soda

1 cup flour (preferably pastry)

Arrange by teaspoonsful on

cookie sheet. Press flat with a

floured spoon or mark with a

floured fork. Bake until firm

(about 10 minutes). Makes 60.

Stir in

1 egg

1/2 teaspoon vanilla

1/2 teaspoon salt

1/2 teaspoon baking soda

1 cup flour (preferably pastry)

Arrange by teaspoonsful on

cookie sheet. Press flat with a

floured spoon or mark with a

floured fork. Bake until firm

(about 10 minutes). Makes 60.

## Quantity Recipes

In a commune I lived in in New Mexico we had two major problems: food and sex. This book will give you a long way to helping you solve the first. What a drag to take down the Joy of Cooking, find something really groovy to fix for yourself and friends and have to spend a half an hour multiplying all the ingredients by seven or eight knowing that you couldn't possibly need a cup of oregano in the chili, but that's what your figures say. We ate some pretty bad experiments and several of the women and men shed away forever from that still and the lettuce salads. Enormous portions of food take a certain skill or they become enormous pots of glop.

In my opinion the recipes are basic, that is, I would add here and there seasonings, etc. to make the food social, new, hopefully an experience and not just another meal. Like all cookbooks this finally becomes a guide rather than a good but it will show you a road and act as a guide until the process becomes intuitive. After, after a few weeks, or months, cooking creatively can get a bit strained. Cookbooks will pull you through with the advantage of this one already being adjusted for a large group. One of the best dollar tools a community could buy.

[Reviewed by Steve Katona]

While you're at it, get their free catalog of Bulletins, which are an innumerable titles on food, kitchens, shopping, clothes, flowers, etc., at low cost.

[Suggested by Roger Knights]

## Quantity Recipes

Marion A. Wood, Katharine W. Harris  
1945, 1966, 235pp.

\$1.00 postpaid

from:  
Cornell Home Economics Extension  
New York State College of Human Ecology  
Mail Room  
Building 7, Research Park  
Cornell University  
Ithaca, New York 14850

Another means of decreasing the cost of a recipe is by extending the more expensive items with cheaper ones. Meat stew is used as an example:

### MEAT AND VEGETABLE STEW

Yield: 10 servings

3 servings per pound of meat	Price per unit	5 servings per pound of meat	Price per unit
15 pounds beef	\$10.65 \$0.71/pound	10 pounds beef	\$7.10
1 cup onions	.01	0.03/3 cup onions	.01
2 quarts carrots	.14	0.06/3 cup carrots	.21
2 quarts potatoes	.12	0.04/3 cup potatoes	.18
1 cup celery ribs	.09	0.13/bunch 1 1/2 cups celery ribs	.14
1 1/2 quarts (2 1/2 pounds) peas, frozen	.45	0.18/pound peas, frozen	.72
Total cost	\$11.46	Total cost	\$8.36
Cost per serving \$0.23 (\$11.46 ÷ 50)		Cost per serving \$0.17 (\$8.36 ÷ 50)	

The cost of left-over foods used in recipes should be included when figuring costs.  
Average serving size and cost of serving, 1966, are given in the appendix.

## The Tassajara Bread Book

You'd expect Americans to have a particularly reverent attitude toward bread—it's been in our history since early colonists learned corn bread from the Indians. Trappers had their hard tack, gold miners their sourdough. No such attitude seems to have survived. Instead, bakeries today offer us tasteless cotton-textured white conglomeration and little else.

Here's a breadmaking guide that stands on profound respect for simple, wholesome ingredients and a "ripening, maturing, baking, blossoming" process, that turns a glob of dough into a fragrant food fit for any man's meal. Good bread is always magically more than the sum of its ingredients.

There are recipes for breads yeastless and unyeasted, fruit-filled loaves, sourdough, pancakes, pastries, muffins, and various favorite snacks from the Tassajara kitchen. This Zen cook knows the true nature of bread.

—Hal Hershey

### The Tassajara Bread Book

Edward Espe Brown  
1970, 146pp.

\$2.95 postpaid

from:  
Shambhala Publications, Inc.  
1409 8th Street  
Berkeley, California 94710

or WHOLE EARTH CATALOG



## TASSAJARA YEASTED BREAD

The fundamental Tassajara Yeasted Bread recipe.

(Four loaves)

- 2 c lukewarm water (85-105°)
- 2 T yeast (2 packages)
- 1/2-3/4 c sweetening (honey, molasses, brown sugar)
- 2 c dry milk (optional)
- 7-9 c whole wheat flour (substitute 2 or more cups unbleached white flour if desired)
- 2-1/2 T salt
- 1-2 l c oil (or butter, margarine, etc.)
- 6-8 c additional whole wheat flour
- 2-4 c whole wheat flour

Dissolve yeast in water.

Stir in sweetening and dry milk.

Stir in whole wheat flour until thick batter is formed.

Beat well with spoon (100 strokes)

Let rise 60 minutes.

Fold in salt and oil.

Fold in additional flour.

Fold in additional flour until dough comes away from sides of bowl.

Knead on floured board, using more flour as needed to keep dough from sticking to board, about 10-15 minutes until dough is smooth.

Let rise 50 minutes.

Punch down.

Let rise 40 minutes.

Shape into loaves.

Let rise 20 minutes.

Bake in 350° oven for one hour.

Remove from pans and let cool, or eat right away.

## TIBETAN BARLEY BREAD

The only bread you need to know to make, the greatest. (One large loaf)

2 c barley flour

4 c whole wheat flour

1/2 c millet seed (or roasted sunflower seeds or roasted sesame seeds)

1-1/2 t salt

2 T sesame oil (for flavor and lightness; if no sesame oil, you can use all corn oil)

2 T corn oil

3-1/2 c boiling water

Pan roast barley flour in 1 T sesame oil until darkened. Mix flours together with salt. Add boiling water between hands until only. Add boiling water, using spoon to mix until dough begins to form then mixing with hands, keeping hands cool by dipping them in bowl of cold water. Mix until caroble consistency. Knead until smooth. Place in oiled pan. Cut tops lengthwise. Proof 26 hours or overnight. Cut tops lengthwise. Proof 26 hours or overnight. Bake at 500° for 20 minutes on middle shelf, then 450° for 40 minutes on top shelf. Crust will be tough but inside tender. If at first you don't succeed, don't be discouraged. Try baking at 350° for 1-1/2 hours.



CALLING THE FLASH

It was such a good movie, in fact, D.R. couldn't resist calling the Anheims Flash and telling him about it. He pressed the lever down, let it up again, put in two nickels, dialled 6, and when the operator answered he asked her to put him through collect to the Anheims Flash in Anheims, California.

"Where are you now?" asked the Flash.

"I'm at the movie in Cincinnati, Ohio," said D.R.

"Far out," said the Flash. "What's on?"

"Well," said D.R. "Right now it's a short subject about this lady waiting outside a phone booth for this freak to quit talking and come out."

"That sounds like a pretty good movie," said the Flash.

"Listen," said D.R. "You obviously ain't heard the latest yet. Cincinnati is the new film capital of the world. There's been an incredible revolution here. I mean, like, it's so new it's only about half an hour old. I mean man you talk about interludes, I mean, like Cincinnati is fucking Frontier City. You know what they get here?"

"That is no shit. They got these little one man theaters all over town. Pay your dime, go in, sit down, and the whole thing comes alive with movies from every which direction. It's really heavy stuff, man. I mean, like this lady, I mean she's about to go crazy right on the fucking sidewalk. It's super far out."

"What about yourself?" asked the Flash.

"You mean me?" said D.R.

"Yeah," said the Flash. "You don't sound too goddamn sane yourself. What are you on, anyway?"

"Well, oh man I'm on 'em." said D.R.

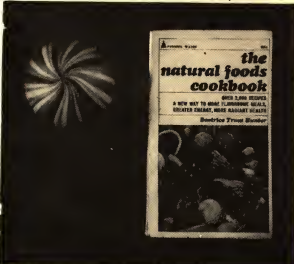
"Yeah," said the Flash. "It's an ordinary enough question."

(continued)

## The Natural Foods Cookbook

Since one of the prime problems of the switch-over from supermarket foods to real foods is where to find them—this book serves appropriately with a check list of basic natural foods followed by a list of supply sources. From there on it's one fine and beautiful recipe after another: basics from milk to yogurt & cheeses, yeast, sprouts, whole grains to Delights (herbed mushroom casserole, lemon-honey jelly with a few geranium leaves). Concludes with a list of suppliers of appliances (grinding mills, vegetable steamers, yogurt incubators).

—Lloyd Kahn



### The Natural Foods Cookbook

Beatrice Tunt Hunter

1961; 368 pp.

\$0.95 postpaid

from  
Pyramid Publications, Inc.  
444 Madison Avenue  
New York, N. Y. 10022  
or WHOLE EARTH CATALOG

### BAKED INDIAN PUDDING

1 quart milk

1/2 cup cornmeal

2 tablespoons soy flour

1/2 cup sweet cider

1/2 teaspoon salt

1/2 teaspoon cinnamon,

ground

Scald milk in top of double boiler over direct heat. Make paste of cornmeal and soy flour in cider. Blend with milk, cover and cook over hot water for 20 minutes. Add rest of ingredients. Remove from heat. Turn into oiled casserole. Bake at 325° F. for 2 hours or until set. Serve hot, topped with yogurt. Serves 6.

### SQUASH-CHESTNUT SOUP

1 quart stock

1 cup squash, cubed

1 onion, chopped

1 cup celery and tops,

chopped

1/2 cup carrots, cubed

1/2 pound chestnuts, shelled

and boiled

Heat stock. Add vegetables, chestnuts and bay leaf. Cover. Simmer until vegetables are tender. Remove bay leaf. Blend milk, milk powder, flour and yeast. Add to soup mixture. Heat thoroughly. Serve garnished with parsley. Serves 6.

### WALNUT-CHEESE LOAF

1 cup walnuts, ground

1 cup hard cheese, ground

1/2 cup wheat germ

1/2 cup grits, soaked in

1/2 cup stock

2 onions, chopped and

sautéed

Combine all ingredients. Turn into oiled loaf pan. Bake at 350° F. for 30 minutes. Serve with favorite sauce. Serves 6.

1/2 teaspoon ginger, ground

1/2 cup molasses

3 tablespoons nutritional

yeast

1/2 cup dried fruit, chopped

(optional)

1 bay leaf

1 cup milk

1/2 cup milk powder

1 teaspoon soy flour

3 tablespoons nutritional

yeast

1 sprig parsley, minced



## The Impoverished Students' Book of Cookery, Drinkery, & Housekeeping

A brief intelligent introduction to cheap food preparation.

—SB

[Suggested by Derek Shearer]

What to do with Left-Over Bread

Never throw out any dry, left-over bread. Slice it, dip it in a mixture of egg-milk-sugar-vanilla and a dash-of-salt, try it in butter and you have French Toast. Cube it, sprinkle with melted butter and garlic salt, brown it under the broiler, and you have Crostons. Roll or grind it into crumbs, put them in a plastic bag, and refrigerate. You'll never have to buy bread crumbs. Or just use it dry as a doorstop.

The Impoverished Students' Book of Cookery, Drinkery, and Housekeeping  
Jay C. Rosenberg  
1985, 48 pp.

\$1.50 postpaid



from:  
Doubleday & Co.  
501 Franklin Avenue  
Garden City, Long Island, NY 11531  
or WHOLE EARTH CATALOG

## Heloise

If you can get by the "little-wifey-in-the-kitchen-where-she-belongs" atmosphere of these books, there really are many useful hints. In keeping with the little wifey bit, a goodly proportion of the hints are directed towards things that might not interest younger people these days. How many of us worry about cleaning lampshades? On the other hand, using a plumber's friend as a washing machine is fine, and I've cleaned up many an oil spill with Kitty Litter. How about using a sewing machine with no thread and a big needle to punch the holes for hand stitching leather? Ants won't cross a chalk line in your floor, flies won't visit a garbage can with old crankcase oil in the bottom, Epsom salts in beer will frost a window, a light bulb with shortening after defrosting will make the next defrost a quick affair. But... chocolate toast? Read em standing at the newstand.

[Suggested and reviewed by  
Jay Baldwin]

Heloise's Kitchen Hints  
1963; 180 pp.

Heloise's Work and Money Savers  
1967; 241 pp

each \$0.75 postpaid

from:  
Pocket Books, Inc.  
1 W. 36th St.  
New York, N.Y. 10018

or WHOLE EARTH CATALOG



From Maine: "This is a good hint for wives who have tried to DRY OUT HUNTING BOOTS overnight. I used to hang them upside down over a furnace, stuff them with paper and the like but they were still almost impossible for my hunter to pull on for the next hunt. Then I found that if I reversed the vacuum hose on my vacuum cleaner (so it would blow), inserted it in the boot and let it run, the boots would be dry within minutes. Much comfort for him and what a time-saver for me!"

How about THAT? It also works on wet shoes. NEVER try to dry boots over heat of ANY kind. RUIN leather! I know. I tried. They curled up and died.

From Nevada: "How about licking the CORNER OF THE ENVELOPE instead of licking the stamp? I just don't like glue."

It's sad. You won't believe it, but try it next time you want to put a stamp on an envelope. Sure keeps the nasty taste away. Many people have asked why they don't just put cherry, chocolate, or lemon flavor in glue on stamps. Most say the flavor they taste when they lick a stamp has to be identified—except that it "ain't" good.

## WILD, BUT IT WORKS!

French peas can be shelled very fast with a wringer-type washer. Put a pan on one side of the wringer to catch the peas and the pods on the other. You will think peas will go through the wringer and be washed the moment the pod hits the wringer, but they will pop out before they go through. A very fast job can be done this way.

## Gourmet Cooking for Free

What to do with your beavertail, mosanosa, wild star-berries, fieldmoss, muskels, crayfish, and other non-supermarket provender.

—SB

Gourmet Cooking for Free  
Bradford Angier  
1970; 190 pp.

\$4.95 postpaid

from:  
Stackpole Books  
Cameron & Keller Streets  
Harrisburg, PA 17105  
or WHOLE EARTH CATALOG

## GRILLED TROUT

The smaller the trout or other fish, the hotter the grill should be. If the fish breaks or sticks when you turn it or take it up, then odds are that you didn't let the metal get hot enough at the onset. Too, grease the grill well at the start.

Either salt the inside and outside of the trout up to an hour before broiling, or sprinkle the inside with freshly ground black pepper and lemon juice just before it goes on the heat. Whole fish will be split or not, depending on the size and on your preferences. Even when the fish has a thick skin well cushioned with fat, brushing frequently with melted butter will add to the flavor. Once the translucency of the flesh has clouded to opaqueness, the fish will be ready for serving.

Paprika butter melted over grilled trout enhances both appearance and flavor. This can be easily prepared beforehand by melting in a skillet, proportionately, a tablespoon of butter, mixing in 1/2 teaspoon of powdered onion, and cooking over low heat until golden, constantly stirring. Allow this to cool, cream with a teaspoon of paprika and butter, shape into about 1-teaspoon portions and relegate to the refrigerator.

## FRIED MUSSELS

Mussels, widely available in both fresh and salt water, afford considerably more food than a similar amount of clams or oysters because their shells are so thin. One of the tenderest and most delicate of shellfish, mussels can be deliciously cooked in all the ways oysters and clams are prepared. If you live along the California coast, though, be sure to avoid them when they are quarantined from May to October because of their eating a plankton poisonous to humans during that period.

All you have to do to prepare mussels is scrub them well, preferably with a wire brush and either pull off the beard (the stringy piece connected to the inside of the shell by which they cling to rocks), or cut it off with the sharp knife. Don't use a sharp knife. Don't use a saw opened when handled. Incidentally, if you steam your mussels and any have remained closed, discard these without opening them, as the shells will be filled with mud.

For temptingly fried mussels, briefly steam them with a small amount of water in a covered pot until they open. Then discard all black parts, and if you haven't already bearded them, do this now. Dip in beaten egg. Then roll in either fine cracker or bread crumbs that have been salted and prepared to taste. Fry very lightly in butter until a creamy golden yellow.

## SEA MOSS BLANCMANGE

The seaweed called Irish moss (*Chondrus*), common along the Atlantic shores of Canada and the United States where it can be gathered at low tide, cooks up into a delicate blancmange which is so digestible that many drug stores stock it for invalid diets. You can have this moss at any season, wash it well in fresh water, and then dry it for future use. Spread out in the sun, it bleaches a pretty white.

When ready to cook, soak 1/2 cup of this iodine-rich marine alga, also called carrageen moss, for 20 minutes in enough cold water to cover it. Then drain and pick out any discolored bits. Add what is left to a quart of milk in the top of a double boiler. Cook over boiling water for 30 minutes. Then strain the milk.

Stir 1/4 cup sugar, a teaspoon vanilla, and 1/4 teaspoon salt into the strained milk. Turn into custard or mold; that have been immersed in cold water, chill in the refrigerator or firm, and then serve with cream and sugar. A topping of wild strawberries really sets these off.

## Let's Cook It Right

I'd recommend Let's Cook It Right just for plain easy delicious recipes, down-home-style, even if it weren't for the nutritional advice, which is also well worth getting ahold of. Sure, Adelle Davis is kind of a fanatic, but I've learned a lot from her. In the past year about how to cook without destroying food value. As it turns out, this often means cooking quicker and tastier anyway. Since she explains the nutritional principles behind her methods, you can easily learn to apply her methods to recipes from other cookbooks. I particularly like the sections on variety meats, which are often neglected, and on baking (though it's a shame she chickens out on cakes). And it's extra nice the way she watches out for your budget.

[Reviewed by Ellen Hershey.  
Suggested by lots and lots of people.]



Let's Cook It Right  
Adelle Davis  
1947; 1970; 576pp.

\$1.50 postpaid

from:  
American Library, Inc.  
1301 Avenue of the Americas  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

Parsnips are often disliked largely because of the abominable method of cooking them in water, which they soak up like a sponge. They are most delicious if not touched with water after they are thoroughly washed. Even when they are steamed, sugar quickly dissolves out; if overcooked only a few minutes, the pulp becomes waterlogged and mushy. Parsnips cook quickly; hence recipes which advise cooking them twice should be avoided. Since the sugar in parsnips burns easily, the heat should be kept low after they have been heated through.

## LIVER WITH APPLES

Mix together well:

3 chopped unpeeled cooking apples  
3/4 teaspoon salt  
1 chopped large onion  
freshly ground black pepper-corns

Place in oiled baking dish:

1 pound sliced baby beef, pork, or veal liver

Cover liver slices with apple-onion mixture; top with:

4 slices bacon cut in half  
generous sprinkling paprika

Add:

3/4 cup hot water

Cook in moderate oven at 350° F. for 20 minutes.

## Gourmet Cooking for Free

## Cooking High

For those of us living over 5,000 ft up — BAKING AT HIGH ALTITUDE, cake, cookie and quickbread recipes adjusted for cooking about 5000 feet and adjusted again for over 7000 feet cooking. IT IS FREE. Put out by the University of Wyoming. Write for: Bulletin 427

Write to:

Agricultural Experiment Station  
University of Wyoming  
Laramie 82070

Tom Duckworth  
Embuado, NM

## The Grub Bag

I wouldn't be too surprised if somebody has already reviewed this book. I got it about four hours ago at a bookshop that had just gotten it in. Until now I didn't believe there was such a thing as a book that couldn't be put down. With all due respect, I don't even read the Catalog in one sitting. Now that your appetite is thoroughly whetted, the book is called *The Grub Bag*, by its Jones. She's written a series of food columns for the *Liberation News Service*, but as far as I know, this is her first book.

This isn't the first time that a cookbook has been written with philosophy and politics facing the recipes, but it is the first one I've seen that doesn't look as though the recipes are the author's but the wit and wisdom are somebody else's.

Its Jones seems to have a slightly different attitude towards food than most cookbook authors. She reminds me of a physics prof I used to have who wanted his students to consider the full range of possibilities of a physical concept instead of cranking through problems to which the concept obviously applied. (For instance, did you know that a good way to figure out if you're in a space station or not is to jump off a chair? Man is at least as sensitive to the angular rotation of a space station as he is to variations in gravity—your head would feel as if it had been kicked by a mule.) Anyway, its Jones has that same kind of open-mindedness. If you were writing a book about cooking, would you think to include a chapter on cannibalism? Even if you'd read *Stranger in a Strange Land*?

Some of what I thought were the more memorable things she said appear below. As an exercise, in reading the book yourself, you may want to look for something that occurred to me—her writing reminds me just the least little bit of Thoreau's writing in *Walden*. (reincarnation?)

For most American eaters, eating has become truly one-dimensional, instead of the amazing art of combining the fruit and flesh of the earth into experiences worth remembering.

Eat a meal and know that it was eaten a thousand years ago, and tasted like what it tastes like to you now. Know that what I used was in this dish was used not by choice but because it lived or grew in the area (even in life the ingredients were inter-related), that those who lived the desert ate that which arose from it and returned to it, and that those who lived by the water ate that which was part of it, and that we have lost this link (among others) between ourselves and our surroundings because in Colorado we eat fish, and near the harbors, lamb.

Pineapple tops can become beautiful strange plants. Slice off the crown and place it, cut side down, in a saucer of water. After it has begun to grow again, plant it in sandy compost and keep in the sun.

The seeds of grapefruit, oranges, lemons, and tangerines are usually thrown away, but even these grow into tiny plants which are happy indoors. Wash the seeds and plant them, three or four to a pot, in the sandy soil. Keep in a warm, dark corner until they have sprouted. Then move them to a window sill. If you put them outside in the summer, the woody parts will develop, giving you small graceful trees.

Another thing I'd like to mention is that this book is *definitely* for those of us who need step-by-step instructions just to boil water. Absolutely *nothing* is missing from her directions.

I suppose it's also worth mentioning that none of the recipes are really hard to get or expensive. There isn't any of this jazz about "procure the hind toes from twenty willing pornstars."

I think that even people who have been cooking for fifty years could find some things to interest them. For instance, there are recipes for home-made yogurt and home-made curried powder, which aren't all that difficult to make but just don't appear in the average cookbook.

(Suggested and reviewed by Lou Bjorndal)

## The Grub Bag

Its Jones

March 1971; 258 pages

\$1.95 postpaid

from:  
Random House  
Westminster, Md. 21157

or WHOLE EARTH CATALOG



## Zen Macrobiotic Cooking

A good place to start with Macrobiotics (the philosophy of eating as a means to vitality and rejuvenation).

This book is more recent, pleasantly readable, liberal and digestible than the writings of the system's founder-master Georges Ohawa. However, once you read this, you may get into the others. Also a monthly publication.

(Reviewed by Lloyd Kahn)

In Japan it is known as yin and yang. Here, in America, it goes by the rather chemical terms of acid and alkalinity. It tells you eat something acid and have heartburn; common knowledge tells you to take something alkaline. Acid-better, perhaps. Acid foods are rich in potassium; alkaline, in sodium.

A few do's and don'ts

Learn above all to cook rice and to cook it well. One condition is to use a heavy cast-iron pot. Prior to cooking, wash the rice with cold water in a strainer. While cooking, never stir the rice, and keep it covered.

Sometimes when you cook rice, the bottom of the pot is slightly scorched. This part is yin. It is very rich in minerals and very good for yin people.



## HOMEMADE CHRISTMAS SOUP

1. Heat a few tbsp. oil in a large pot and in it brown one meaty soupbone and one large chopped onion.
2. Add just enough turmeric to make the onions yellow, 1½ tsp. salt, pinch of pepper, 5 or 6 whole cloves, 1 bay leaf, ¼ tsp. thyme and generous pinches of allspice and sage, and sauté for a few minutes.
3. Add 1½ to 2 qts. water, part of which can be liquids saved from canned or cooked vegetables (corn juice is especially good) and about 4 tbsp. barley.
4. Cover and simmer very slowly for around 2 hours.
5. Now add 3 medium raw potatoes peeled and cut into small pieces, a couple of carrots cut, and any leftover vegetables or noodles you have on hand. A bit of leftover cooked oatmeal is also very good. Add a small can of stewed tomatoes or a ripe tomato, chopped, and 1 pkg. of dehydrated vegetable soup, which can be omitted if you can't find it. Simmer another half hour or until the vegetables are tender.
6. While the soup continues to simmer for a few more minutes, remove the bone from the pot, and when it's cool enough to handle, cut off all possible meat, dice and return meat to the soup. Turn off the heat.
7. Let the soup "stand" for at least 15 minutes before serving with a simple salad and good cheese and bread. Cheap red wine goes well with soup, probably because it is the staple drink in countries where this sort of soup has long been made.

Zen Macrobiotic Cooking  
Michael Abehara  
1968; 258 pages

\$1.25 postpaid

from:  
Avon Books  
659 8th  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

MICHAEL ABEHARA



zen  
macrobiotic  
cooking  
CONTAINING 100 RECIPES  
AND 100 ILLUSTRATIONS  
BY LOYD KAHN

## Goodcookbooks

Larousse Gastronomique in English

the history of the civilized use of food articles on all kinds of Western food & a little oriental fall access to the secrets of the ultimate in Western cooking not for "the modern housewife" read about what you are eating at the dinner table! It is very difficult to think about anything but food when you are eating. —Gervase Stiles

(Please include a word of caution about Rembeau-Baker next time: the instructions are over-simplified; the recipes are hedge-podge; there are a great many obvious errors in the use of the symbols; if you have to refer all around in the book. Also, the OLD Fanny Farmer should be reprinted. Classical American cooking, the faint-hearted)

How to Cook a Wolf, by M.F.K. Fisher

A humanistic survival book for periods of shortage and extreme poverty (such as WWII in Europe) (what it was written in Western societies. Very funny & a little sexy. World-publisher, Cleveland. Still in print?)

"To work! to work! for Heavens sake! The Wolf is at the door!"

(do you hate the French? You have hardly anything French in your whole thing. They are great. (Yeah. —SB)

Fredrick Ted Castle  
New York, N.Y.



"What am I on," said D.R. "I think that what I am on is intensity. Intensity and precision. I feel very intense and precise today."

"Is that what they're dealing in Cincinnati?" asked the Flash. D.R. laughed. "Yeah. You get it out of the vending machines in these little theaters."

"Well," said the Flash. "It sounds like old Cincinnati is really where you live."

"Most definitely," said D.R. "Without question. Most definitely."

"Listen," said the Flash. "Where's Estelle?"

"The bus station. Her Flash, listen: it is cool that I called? I mean, I know this is on your bill. But you got money, right? You still got all your money?"

"Still got it," said the Flash. "Okay, and you can stake me to this call, right? I mean I don't want to impose it..."

"Carrie blanché, man," said the Flash. "You sound to me like you need a friend."

D.R. laughed. "Well, at all need friends, Flash. But I'm I'm. I've just got stuff on my mind. A lot of new stuff is going on. I mean, two days ago I couldn't even talk. I've been kind of bummed out, but I feel pretty good now. Her Flash?"

"Yeah, man."

"Listen, man, I really think you for the use of that card. It really saved our ass."

"No sweat," said the Flash. "What's Estelle doing at the bus station?"

"Hanging around. Her Flash, guess what my nephew said this afternoon. He's this nine year old jackpot in the Little League, see, really fer-out kid. I come in, our first conversation he says, 'You're a turd.' And then he says, 'You're a queer, why don't you go out and have a car wreck?'"

"Nice kid," said the Flash. "No man, I mean he's far out. It's pretty wild around here."

"So you've already seen your sister."

"Yeah, I was out there. Say, man, what time is it anyway?"

"It's eight o'clock in California. Listen, old friend, I'm worried about you. No offense, but it sounds to me like Cincinnati ain't no healthy place for a righteous dude to be."

"Ahh," said D.R. "It's all just a movie. It's just another quadruple feature happening simultaneously all around. It's okay."

"That's what you say," said the Flash. "But that ain't how you sound. I'm afraid you're not trusting in the Lord enough."

D.R. laughed. The Anaheim Flash asked him what was funny.

"What you said. I heard that as a line of dialogue from the lady in the movie. It's pretty funny."

The Anaheim Flash asked D.R. how the lady was getting along. "Not too good, I'm afraid. The freak won't get out of the phone booth. She's got her nose up against the screen now, peering right in on him."

"Why don't the freak kiss her?" said the Flash. "Flash, you're a genius," said D.R. And D.R. puckered up and leered forward and kissed the movie screen as the woman, horrified, drew away.

"Did he kiss her?" asked the Flash. "But D.R. was laughing too hard to answer. He laughed so hard and so long he finally had to tell the Flash it didn't look like he was going to be able to go on with the conversation. The Flash said he guessed he'd hang up then.

"But listen, man, stay cool, you hear? You take care, and tell Estelle she's much loved, okay? Tell her Angel really wants to hear from her."

"Right," said D.R. "And I thank you for talking to me, I really do."

"Anytime, man," said the Flash. The Anaheim Flash hung up then, and D.R. went on listening to the dial tone.





## Remember— Yogurt

Here it is! The definitive yogurt recipe, courtesy of me. No special equipment, no watching the pot for hours & fusing about keeping it a special temperature—AT ALL.

**Equipment:**  
1 large pyrex (or otherwise heat-proof) mixing bowl  
Measuring cups, spoons  
Jars to store the yogurt in  
Oven

**Ingredients:**  
3 cups instant powdered milk  
1/2 tsp. unflavored gelatin  
1 tsp. sugar (optional)  
1 large can evaporated milk  
3 tsp. yogurt  
Water

**Instructions:**  
Soften the tsp. unflavored gelatin then add boiling water to make 1 cup. Add 1 tsp. sugar (this takes the "sugar" off), and let the mixture cool a bit.

Preheat the oven to about 275°.  
250-300° range is O.K.)

Mix 3 cups instant powdered milk with 3 cups water. Add 1 large can evaporated milk, 2 more cups tepid water, and the gelatin mixture.

Add 3 tablespoons yogurt and stir thoroughly.

Cover the bowl, put it in the oven, and **TURN THE OVEN OFF.**

Leave it overnight, or about 8-10 hours.

Makes about 2 quarts, and is "fodder-proof!"

J. Lundquist

# HOW



## Baking Soda

For 15 cents, you can buy a humble tool that replaces a lot of fancy-priced ones: Arm and Hammer baking soda.

**Potential uses—**

- 1) **Toothpaste.** Mix soda with salt, for the kind of toothpaste old-time Texas dentists used to say was better than storebought.
- 2) **Acid indigestion tablet substitute.** Just take a little soda with a glass of water.
- 3) **Scouring powder.** Especially good in refrigerators, because it deodorizes.
- 4) **Sunburn ointment substitute.** Spread on paste of soda and water.
- 5) **Putting out kitchen fires.**
- 6) **Maybe even baking??**

anonymous

## Bibble Ladbetter adds:

For those who still smoke you can put some on your car ash trays to absorb the odor and safely snuffs your cigarettes out. It's a great refresher when added to your bath.

Use it when I clean my iron skillets, cutting boards, knives, etc. It not only helps to remove baked on foods but it does not leave a detergent taste to the equipment like the above that tend to absorb odors.

Plus a pound costs only 21 cents.

Bibble Ladbetter  
Washington, D.C.

## Safer Than Shell Pest Strips, Easier Than Swatting

Another suggestion: Fly **"Paper."** Absolutely non-toxic and it works almost as well as pest-strips. The type I use is **Aerozon** which is made by **Aerozon products, New York, N.Y.,** and which I bought at my local hardware store.

Tom Delaport  
Delaque, Va.

## Applause

*Help!! Please! I found a fantastic and easy yogurt recipe in your catalog (not the latest, but the one before that. I have been using it for a couple of months, but when I want to look for it last night, I couldn't find it anywhere!! Do you think you could help me get another copy? There were two on the same page—the one I want used powdered dry skim milk, evaporated milk, gelatin water & 1 T of sugar. I would really appreciate anything you could do to help, as this is what I've been getting my husband for lunch & it's the first yogurt he would not only eat but ask for. Thank you, thank you.*

Karen Barnes  
N.M. Beck, Fla.

## How to Make Butter and Cheese

Chr. Hansen's Laboratory, which sells vegetable-butter coloring, cheese color tablets and cheese rennet tablets, have some great illustrated charts on **Butter and Cheese making,** and a 24-page booklet **How to Make Cheese.** They're all free. We've reproduced the essential steps here. **Goat Husbandry** (page 64) has several good recipes for butter and cheese using goat's cheese.

—SB

## How to Make Butter on the Farm (chart)

## How to Make Cheese on the Farm (chart)

## How to Make Cheese on the Farm and in the Home 1939; 24 p.

free

from:  
Chr. Hansen's Laboratories, Inc.  
9015 West Maple Street  
Milwaukee, Wisconsin 53214

## Crunchy Granola

We have not read all of the supplements so we don't know if you have had printed recipes for crunchy granola. If you haven't—here it is: MIX

- 4 C rolled oats
- 1 1/2 C shredded unsweetened coconut
- 1 C wheat germ
- 1 C chopped nuts
- 1 C hulled sunflower seeds
- 1/2 C sesame seeds
- 1/2 C flax seed
- 1 C bran
- 1 C ground roasted soybeans

## HEAT—

- 1/2 C oil (soy, sesame or corn)
- 1/2 C Honey
- 1/2 t vanilla

## ADD

honey-oil mixture to dry ingredients and mix (mixture will be very dry)

## SPREAD

mixture on oiled cookie sheet or jelly roll pan (cookie sheet with sides) & bake at 325 degrees about 15 min. until light brown.

All measurements are approximate and it's nice to improvise with ingredients, too. However, you make it, it will be much, much better than any commercial varieties.

I would like to know of good books on vitamins, lecithin, pollen, evening, yulives, etc. It can't even spell them but I'm interested to know what they do for you. Everyone I ask explains them a little to astoterically from my plasticized head.

Thank you.

Philip & Elizabeth Schnazerson  
Berkeley, Calif.

## Applause

*We've been using the Granola recipe sent in by P. & E. Schnazerson. It's been working fine. We've made up to 15 lbs at a time (at 35 cents to 45 cents per lb) (to get 15 lbs of granola you have to multiply their recipe by 6.) Our kids love it about 75% because it's almost become a staple in our houses. We may also sell it. With anywhere from 3 to 6 people mixing, spreading, turning etc, we've gotten the whole process down to an art. Everyone knows their job. The hardest part is cooking because you have to turn it over every 3-5 minutes. Important! turning granola on the cookie sheet is done at 4 turns each. It's most important near the end of the 12 minute cooking period. So you may wait 5 minutes from when you first put it in the oven, then 4 then 3 then 3 then 3 then 3 then 3. People should figure it out themselves, too, vibration cooking is where it's at.*

*We've been using the Corona Mill with great satisfaction. Whole wheat kernels (from a local grocery) cost about 4 cents a lb. The kernels can also be boiled like rice or beans (first soaked overnight, tho) for an interesting meal.*

Daniel J. Schuchman  
Grand Rapids, Michigan

P.S. Flax seeds in recipe should be ground, or chewed very well.

## 7 Permit Gas To Escape

After a few revolutions, stop churn, bottom up; remove cork to permit the escape of gas. Repeat this 2-3 times during early stages of churning.

## 8 Churn until Butter "Comes"

Wait for the change in the sound of the cream, and for thick mushy mass to appear on glass in churn. Then turn churn several times more, and stop to examine butter granules.

## 9 Stop Turning when granules are size of wheat grains

When sound of cream in churn changes watch the granules through the glass and stop churning when the butter granules are the size of wheat grains of wheat.

## 10 Draw Buttermilk

Let the buttermilk out of the churn through the hole at the bottom of the churn. Run through a strainer to catch any particles of butter.

## 11 Wash Butter

While the last of the buttermilk is drawing off, prepare the wash water: Pure, clean water, twice the quantity of the buttermilk, and about the same temperature. After all buttermilk is drawn off, replace cork and pour one-half the wash water into churn. Replace cover and turn churn rapidly about four times. Draw off wash water and repeat washing.

## 12 Salt and Work Butter

Rinse "worker" once again with hot and then with cold water, leaving worker wet. Weigh butter. Spread butter with lardles on water, in a layer about 2 inches thick. Sift salt onto butter—looz, salt per pound butter, or more or less according to taste. Press butter (do not rub or smear it) into thin layer, fold into a pile and press again. Continue working until salt evenly distributed and butter has desirable grain. If you do not have a butter worker, you can still do a good job by working the butter with your lardles or paddles right in the churn or in a large wooden bowl. This should be done by gathering the butter into the form of a ball, pressing it into a thin layer and then repeating this process over and over again until the salt and moisture are well worked in.

## Vegetarian Cookbooks

For the Giant Computer if It wants It. Here are the best vegetarian cookbooks I know of right now, being good tasting, wholesome, full of life, and good loving food. Not all of them are entirely vegetarian, but I've found them all good books when it's time to eat.

**A Good Cook...** Ten Talents  
Fruit and Vegetable Hand, 354 pp., ring binders, colour pictures, \$7.95 from

Allegan Health Clinic  
120 Cullen Street  
Allegan, Michigan 49010

Big natural food cookery and uncookery Bible: "...What you need is less temporal food and much more spiritual food, more of the bread of life... the simpler you eat, the better it will be for you."

**Triad and True Vegetarian Recipes**  
Shilla Judd, 66 pp., \$1.50 from:

Shilla Judd  
584 Oxford St.  
Berkeley, Calif. 94707

Mouth-watering, some of them incredibly delicious.

**Gar Shu Vegetarian Cookbook**  
148 pages, 94 pp., ring binders, \$3.50 from:

Gar Shu  
c/o Della Hancy  
P.O. Box 736

Coolidge, Arizona 85328

make check payable to "Della Hancy"

Gar = sun shine  
Shu = vegetal

**Cosmic Cookery**

Katherine Auld, 44 pp. hand drawings, \$2.00 from:

Messiah's World Canada  
234 Hawthorn Avenue  
Larkspur, Calif. 94035

**Hygienic Cookbooks and Vegetarian Recipe Book**

276 mimeographed 8 x 11 pages, \$5.50 from:

Health Research  
70 Lafayette Street  
Mokelumne Hill, Calif. 95245

**Eight old-timey tracts of the century books in one... totally**

wholesome... one of the best.

**Cooking with Grains and Vegetables**

39 pp., 8 x 11, \$1.00

**Cooking Good Food**

25 pp., 8 x 11, \$1.00 both from:

Erwoun Trading Co.  
8003 Beverly Blvd.  
Los Angeles, Calif. 90048

or

**TAO**

303 N. Newbury Street  
Boston, Mass. 02115

**Yogi Cookbooks**

Yogi Vithaldas, Susan Roberts, 126 pp., \$7.5 from:

Pyramid Publications  
144 Madison Ave.  
New York, N.Y. 10022

"Discover the amazing health secrets of the ancients..." Indian

cakes, sweets, and spicy stuff.

**Cookbooks Book**

96 p., 8 x 11, \$2.00 from:

Tobe's  
P.O. Box  
St. Catherine, Ont.  
Canada

**Raw food recipes and fruit jumbles, salads... cookless.**

**Tassajara Bread Book**

145 pp., \$2.95 from:

Shambala Publications, Inc.  
2010  
Berkeley, Calif. 94710

Make it whole, and chew it up, bread that tastes, and feels good to

make.

**Yogi Kitchen**

40 pp., ring, \$1.50 from:

American Vegetarian Society  
Box H  
Madison, New Jersey 08328

Completely non-animal, no meat, fish, fowl, dairy products, honey,

only stuff that grows on the earth.

**Zen Cookery**

74 pp., ring, \$3.50 from:

Shambala Publications  
1434 North Curtin Blvd.  
Los Angeles, Calif. 90046

**Practical macrobiotics, traditional eating ways Japan country rivers**

**Food Combining Made Easy**

Herbert Shelton, 71 pp., \$1.00 from:

Jaffee Brothers  
P.O. Box 636  
Valley Center, Calif. 92082

Learns what mixes with what, so it can get digested without too much

trouble.

**Scientific Nutrition and Cookery**

For the diet interested in the vegetarian way of life, Donna Grey

Kelly, 109 pp. (mimeo), 8 x 11, \$3.50 from:

Donna Kelly  
1305 Palm Ave.  
Brea, California

Tells what's what in nutrition, why, how, Yummy recipes, and

use advice for children of Light.

**Vegetarian Cookery**

Dr. Pietro Rotondi, \$3.00 from:

Dr. Pietro Rotondi  
1916 Vista del Mar Ave.  
Hollywood, Calif. 90028

## The Soybean Cookbook

This cookbook is listed because too many vegetarians I know are looking too unhealthy. It's particularly poignant when said vegetarians are pregnant and braining the child. Soybeans are extra rich in protein; they're cheap, and not hard to grow. They would come professional nutritionist let us know if they flat-out replace animal protein! Steve Durkee got laid up for a month last summer because of too little protein in the diet at Lama. They're on vegetable protein now. Is that helping, Steve?

—SB

[Suggested by Barbara Kirshenblatt-Gimblett]

Note: Lama now has goats and a cow.



**The Soybean Cookbook**  
Dorothée Van Gundy Jones  
1963; 240pp.

**\$1.45 postpaid**

from:

Ark Books  
219 Park Avenue South  
New York, New York 10003

or WHOLE EARTH CATALOG

### HOW TO MAKE SOY CHEESE

Soy Cheese From Milk

Soy cheese is made by allowing soy milk to sour and curdle. When it is made commercially, lactic, tartaric, or citric acid is used; but acid is not necessary when the milk is properly soured and thickened. When it is made at home, it is made with a knife, place these in a water bath with water, and stir the milk while boiling. Strain through cheesecloth, wringing the curds as dry as possible. Season with salt and a small amount of soy sauce. The fresh cheese can be used like cottage cheese and can be stored in the refrigerator for several days.

Soybeans are an excellent means of making a low-cost diet nutritionally safe. They are one of our cheapest sources of nutritious protein. A few cents' worth of dry beans will serve four to six persons and give them the food value of greater quantities of meat or fish. Soy flour or grits, at the cost of a few cents, can step up the protein content of a dish to equal the more expensive animal protein foods.

### Soy

...Finally a word about soybeans. As a practitioner I'm able to pass on the word to you from the professional nutritionist friends of mine about the relative value of soybean compared to animal protein.

Fit-out on a weight for weight basis soybeans have more protein and more essential amino acids than stein beef. Period. "Normal and Therapeutic Nutrition," by Corinne H. Robinson, 13th Ed., pp. 822 and 823, N.Y. 1962. The problem is more complex, however, because the above superiority of bean over beef is with whole beans, and does not take into account such goodies as how the foods are prepared (boiling, for example, destroys some amino acids) or if the beans are in the form of a milk or flour. Soybeans despite their superiority over beef in the Protein/Digestibility Index are rather poor in methionine, for example, and in no way should they be considered a kind of miracle food capable of meeting all human nutritional needs.

The take-home lesson of the day is that whole populations have done quite well on diets that were largely vegetable, but that the proper nutrition was accomplished by the mixture of supplementary vegetable proteins, such as barley, wheat, and soy proteins. Corn, for example, is terrible in lysine. Soybeans, on the other hand, are good in lysine, and experiments have shown that corn and beans are better utilized when they are taken together. It is not necessary to ingest large amounts of first class. All American Soy protein is meat, milk, eggs, and fish, providing you take in mixed amounts of such as cereals, millets, legumes, nuts, oilseeds, common vegetables, and leafy and grass proteins. I'm sorry to hear one of your friends in Lama fell ill while on a vegetarian diet. But in no way should this be construed as an indictment against the vegetable. There is emerging increasing evidence that the only feasible solution to global malnutrition in the near future is the development of a diet of soybean mixtures, with considerably less nap of the ecosystem. Hope I helped.

Sincerely,

Henry Abraham, M.D.

University of Arizona

Tucson, Arizona

### Soy and Sprouts

Good simple info: Recipes for the Use of Soybeans and Sprouting, free from:

Stirling H. Nelson & Sons, Inc.

525 South 4th West

Salt Lake City, Utah 84110

Totally recommended, every recipe tastes like it tastes... they all

get some feedback from the mothers of the nation, the good cooks,

and the mothers of the nation, and if it fits, send your dollars

or communitaries to:

Banyan bookshop

2739 West 4th Avenue

Vancouver, B.C., Canada

In cases of supreme emergency, the bookshop above named stock

the books above named. Baste!

## "Meat"

Have you ever published a recipe for home-made wheat flour? This is a basic meat substitute and very easy to make, forming the basis of many of the commercially produced, canned substitutes, notably Worthington and Loma Linde vegetableburger, vegetable scallops, dinner cuts, veg-cuts, etc.

Mix 2% to 3 cups of water with 8 cups of flour (gluten flour is easiest, but ordinary white flour will do), enough to make a firm ball. Soak under water overnight. The next day, keep kneading the dough under water and pouring off the liquid, repeating with fresh cold (tap) water until water is clear during kneading (no more starch... this is where gluten flour was nice). You now have Wheat Gluten (the protein of flour) in the form of a large, rubbery ball.

For searing, slice into thin steak size, roll in batter, and grill or fry; chop into fine pieces and use in stews; or put through meat grinder and you have veg-burger, which can be used in many of the same ways as hamburger (ground beef).

As the gluten is tasteless, much like a lump of sponge, disguises are necessary. Yeast extract, soy sauce, vegetable salts, wine, oil, and, in general, anything you can think of, improve flavor considerably. (Perhaps you can find someone to take up with preparing tofu as well.)

Ann Liston

Barnaby, B.C.

Canada

## DOYLE

When D.R. left the phone booth he intended to go directly back downtown to the bus station. But then when he saw Clark Street he figured since he was close he'd pop in on Marcelle and see what those people were up to. When it turned out that they were up to nothing, he decided to go home and try to leave gracefully without eating something, especially since Marcelle had fixed a place for him and had served smoked fish and chow-chow in celebration of his arrival. The family was already seated at the table in the kitchen when D.R. walked in, except for Marcelle who was stirring something on the stove. Doyle was at the head of the table browsing through the Enquirer when he looked up and saw D.R. in the doorway.

"Dadburn your hide, where you been?" Doyle shouted. He scooted his chair back and got to his feet so fast he'd rubbed the dishes on the table rattled. "I come home early on account of you and there you was out and gone already. How you doing, Buddy, I love it's mighty good to see you."

Doyle came across the floor like a coal truck and gathered D.R. into his arms. Then he stepped back and told D.R. "I've been in both his room and pumped vigorously up and down."

"I said to Mers I said deburn the like of him anyhow, me taking off work early to come and see him, and then him not even be here. Where you been, boy, you 'bout to miss my supper."

"Don't listen to him, David," said Marcelle. "He's tickled to have you in an excuse to quit early."

"Daddy home see."

Herschel got out of his chair and crossed the room to where the two men were standing. As they talked he tried to warm in arms and hug Doyle. "You're a good boy, you're a good boy."

"Here now, you little sneak, you sit down, we're getting ready to eat."

"I want to sit next to Uncle David," said Herschel.

"You sit where you always sit," said Doyle. "David's place is all laid out."

Herschel made a face of disappointment, but he obeyed his father. He dropped to his hands and knees, crawled under the table and came up on the other side.

"Feetiest thing ever was," Doyle said proudly. "He's turned into a regular do!"

"You nee to brag about it," said Marcelle.

"Ain't he bragging," said Doyle. "I'm just stating the plain facts. Ain't that right David?"

"Yes, right," said Doyle. "He's just telling the facts."

"What I want to know is how that boy of yours is running," said Doyle. "I told Mers when you called the other day, I said I bet that boy's got car trouble. She said you'd of said so if you had and you know what I said? I said that boy was a piece of work with his car is a don't know when he's got trouble and when he ain't."

Doyle broke out laughing at his joke, and D.R. laughed too. Doyle was a mechanic, and partners with his cousin Vern's in a filling station and garage. The year before, when D.R. had stopped off at Marcelle's and Doyle's, Uprg had a burned valve and D.R. didn't know it. That embryo could drive a car with a burned valve and not know it amazed Doyle, and a burned valve at the same time. Doyle had given Uprg a valve job for free, and Vern had banged a few dents out of the rear fender. It was known at the time that D.R.'s intention was to use his bus to help Eddie transport about a zillion bricks of marijuana to Chicago they'd have been less generous with their work. But the general freaky appearance of the bus, and indeed, of Divine Right himself, had disturbed them not at all. Doyle understood that his brother-in-law was some sort of mild outlaw. But he assumed, as Marcelle assumed, that whatever it was D.R. was into was a piece of work.

Doyle's own youthful outlawry had been a phase, and it never occurred to any of them to withdraw their affection just because the kid was in a phase. Till Doyle was drafted into the army, back in the 1950's, he had terrorized the roads of Eastern Kentucky as a cool truck driver. In the army he'd been court-martialed twice for going AWOL, and general insubordination. He spent eight weeks at Fort Hood, Texas, and then he was sent to Germany later as the best night waker of his entire army career. Doyle was a settled family man now, a father, a tax-payer and, as of the previous month, a member of the Church of Christ. But there was a natural empathy between him and Divine Right, and he kept the fact of his widening differences in their lives they remained among each other's favorite people.



## The Wok—A Chinese Cookbook

Gary Lee knows Chinese cooking and his book for the beginner presents all the great techniques and traditional ways in a well-designed readable format. The wok is the central tool in any Chinese kitchen and its quick-fry principles are here explained clearly. Double-frying, steaming, and the lesser-known traditions of the loo and dah-bun lo are covered. I'm really impressed by this book; it tells more about Chinese cooking than any other Chinese cookbook I've investigated. Lee says he's going to write another book about the fancy dishes, although I wouldn't consider beef and lettuce soup, sweet and sour fish, or steamed minced pork with salted eggs to be drab fare.

—Hal Hershey



The Wok  
A Chinese Cookbook  
Gary Lee  
1970; 178 pp.  
\$3.95 postpaid

from:  
Nitty Gritty Productions  
Box 457  
Concord, California 94522

or WHOLE EARTH CATALOG

### STEPS IN CHINESE-FRYING

1 - Wok must be very dry and clean. If not it will burn before coming to the right high temperature.

2 - In all Chinese dishes there are two basic parts: the principal and the complement. The principal is the meat, and the complement is usually a vegetable. In Chinese-frying you always cook the complement first.

3 - Calculate the amount of oil you will need to cook the complement (1 tablespoon is usually enough for a small portion). Preheat wok to a very high temperature, put oil in wok and then add complement immediately. This is very important. Do not heat the oil in the wok before adding your complement otherwise the food will stick to the wok. The term used for this by professional cooks is "hot wok - cold oil".

4 - When the complement is almost 3/4 done, take it out, set aside, and keep it warm.

5 - Clean the wok with a paper towel, reheat to a very high temperature again and add about 3 tablespoons of oil to cook the principal.

6 - Note: Only 1/2 of the seasonings will be added to the marinade - the other 1/2 will be added when the principal and complement are combined. In this way, the seasonings will be well blended.

7 - When the principal is about 3/4 done, add the complement and remaining seasonings. Never add your seasonings before this time or the food will become soggy - except in cooking tough vegetables such as cabbage or green pepper. In that case, add a very small pinch of salt only when first cooking them.

8 - A very short period of time (about 2-3 minutes) is all that is needed for a good Chinese-fry. You will not have time to measure all the seasonings when you want to add them. Therefore, it is very important that you have them all ready beforehand. Use five or six very small containers (small saucers, pieces of paper, etc.), measure out the seasonings you will use, and place them on these containers before you start to cook anything. Place them within easy reach in the order in which you will use them.

9 - Add the seasonings separately with an interval of at least five seconds between each addition, mixing constantly and gently yet swiftly. Bring the food from all directions to the center so that it will be evenly blended and cooked.

10 - When the recipe calls for water, you can use chicken broth instead. You do not always need to use all the water called for in a recipe - only what you need to make a little gravy. Some vegetables have sufficient natural moisture to necessitate only a little water.

11 - The sesame oil is always added last. Its function is to give a pleasant aroma to the food - if it is included too soon, the aroma is lost. It should be added immediately before the food is served.

## Wok

The wok is too good a tool to pass up. We're carrying a 16" spun steel one with a handy (practically essential) steel ring base to sit on gas burners.

Wok (with ring base and lid)

\$16.50 postpaid

\$13.50 in the store

from WHOLE EARTH CATALOG



### Chinese Food and Utensils

Those wishing to get Chinese food by mail and also certain utensils may obtain same from Cathay Food Products, Inc. 107 Mott St., New York, N.Y. 10013. Catalog sent on request.

Neil & Lorraine Wolf  
Ketchum, Idaho

### Useful Odds & Ends

For those unable to afford a flour mill—an old food mill—the kind everybody's mother has—can be purchased 2nd hand for less than a dollar, is a pretty good substitute. The flour is like a combination of wheat germ & flour—makes an excellent bread—and is very economical. The grinding keeps you strong.

For flesh eaters who believe in bearing the remorse for their actions—hang some californian bay (laurel) in the carcass to keep away the flies, or use it as a flea collar or in your dog's sleeping quarters. Hang it on the wall, pop it in the soup.

Weave rag & old clothes into rugs on a frame with nails on either end in lieu of a loom. Weaves up fast if cut in inch strips. Makes a beautiful covering for floors & walls & keeps out wind & wet. Using string for warp, cost is about 10 cents a rug. Results with colors & designs unlimited.

Polyethylene sheeting a phenomenal material for all occasions. Put it under flooring for a dry, draft free floor use it as extra insulation on walls & windows when its cold. Put a water tank atop your house covered with black polyethylene—hook up pipes & fixtures—no hot running water on gravity pressure. Polyethylene makes an excellent green house over a 2x4 frame certainly cheaper than glass.

Boil eucalyptus leaves in water and use the resulting infusion on poison oak. A very good astringent.

Ann Ligasky



### NEW STEEL GRIDDLE

No.	Diam. of Bottom	Wt. Each
6	8 in.	2 lbs. \$2.48
7	9 in.	2 1/4 lbs. \$2.64
8	9 1/2 in.	3 lbs. \$2.90
9	11 in.	4 lbs. \$3.20
10	11 1/2 in.	5 lbs. \$4.10

## Dutch Oven

A very handy item for the tipi dweller or commune is the dutch oven. A low cast iron cooking pot with three short legs and a flat lip-edged cover. It is used in the hot coals of your camp fire or buried with hot coals in the ground. The results are fantastic! A source for dutch ovens: Lodge Mfg. Co. A paperback book on dutch oven cooking, Old Fashioned Dutch Oven Cookbook by Don Holm.

[Suggested and reviewed by  
Reed Plankenhorn]

### Old Fashioned Dutch Oven Cookbook

Don Holm

1970; 106 pp.

\$3.95 postpaid

from:  
The Caxton Printers, Ltd.  
 Caldwell, Idaho

or WHOLE EARTH CATALOG



The camp Dutch oven, either iron or aluminum, can be permanently damaged by pouring cold water into a hot oven, or uneven heating such as putting only half the oven or lid on the coals, by careless packing while traveling (the legs can be broken off or pushed up through the bottom by too much jostling), and by rust and corrosion.

The lid, turned upside down on the coals or on the pot, is used for frying eggs, bacon, or grilling hot cakes. When using more than one oven, the second can be stacked on top of the first without the necessity of spreading more coals on the ground.

One should probably call the aluminum model the contemporary Dutch oven, which has some advantages and some disadvantages when compared with the traditional cast-iron model. The aluminum model is the only one that can be backpacked by a hiker. It costs about the same as the ironware. But it has a much lower fuel requirement, which can lead to trouble. The trick is to use from one half to two-thirds less fuel or heat to start with and control the heat more carefully.

The old camp Dutch oven evolved through centuries of experience. It was designed for cooking complete meals on open fires without the need for other appliances. (A shovel, pothook, and grease swab come in handy, though.) Its thick construction distributes the heat evenly and thoroughly from a small bed of coals assisted by the tight-lifting, flanged lid.

It can be hung over an open fire, set down in the fire, or buried in a pit of coals. It is at once a kettle, a frying pan, an oven, a pot, and even a stove, all in one portable utensil.

On a camping or hunting trip you can prepare a roast or stew, or even shepherd's bread, go away for a half day or so, only to return bone-tired and happily find a rib-sticking meal waiting for chow down.

For hole-in-the-ground cooking, dig a pit larger and deeper than the camp Dutch oven. Line it with small stones or aluminum foil to prevent loss of heat through the ground. (Be sure to select a site that is pure mineral soil and not full of humus, or you may be the cause of a forest or range fire, which will make you extremely unpopular in most parts, podner.) Build a fire in the hole and let it burn briskly an hour or so, or until there is nothing left but hot coals. Remove some of these, place oven in pit with the rest, and rake the coals back over the oven.

Cover the whole wall of wax with fresh dirt in a blanket about four inches thick. Most dishes require from four to eight hours cooking in this way. The cooking can be hurried along by building another fire on top of the dirt.



### CAMP DUTCH OVEN AND LID

Ribs	Capacity	Depth Inches	Approximate Weight Pounds
8	2 qt.	3	7
10	4 qt.	3 1/2	12
12	6 qt.	4	17
14	8 qt.	4	23
16	12 qt.	4 1/2	30

Lodge Manufacturing Company  
South Pittsburg, Tennessee 37380

## Home Canning of Fruits and Vegetables

You can buy a book on this subject for \$5, or you can get these perfectly adequate Government booklets at 20 cents apiece.

—SB

## Home Canning of Fruits and Vegetables

Home & Garden Bulletin No. B  
1965, 1969, 31 pp.

\$2.20 postpaid

## Home Freezing of Fruits and Vegetables

Home & Garden Bulletin No. 10  
1965, 1969, 47 pp.

\$2.20 postpaid

both from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402



Peaches can be peeled easily if they are dipped in boiling water, then in cold water.

## Storing Vegetables and Fruits

This booklet will be valuable to anyone living in areas where the temperature winter averages 30 degrees or lower. Storing without refrigeration relies on cold outdoor air to cool the stored products. "Basements, cellars, outbuildings and pits" are explained and diagrammed, with specific instructions for different vegetables and fruits. A bargain.

—Hal Hershey

Storing Vegetables and Fruits  
in basements, cellars, outbuildings and pits  
Home and Garden Bulletin No. 119  
19 pp.

\$1.95 postpaid

from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

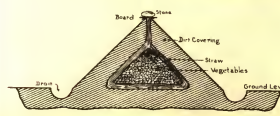


FIGURE 3.—Cone-shaped pit showing details of construction.

## Ball Blue Book

Though this guide to home canning has been in print since 1909, it easily allows the Grandma image and gets you into your own canning. It has illustrated, step-by-step directions and recipes and handy guides for jar estimating. When something goes wrong, there's trouble-shooting guides. If you have a good growing summer, this book can help you have a well-fed winter. A buy. —SB

VEGETABLE	PREPARATION FOR FREEZING
Asparagus	Sort stalks according to thickness. Wash thoroughly. Cut in jar-size or 2-inch lengths. Scald, Chill, Pack, leaving no head space.
Beans, Lima or Butter	Shell. Wash. Sort according to size. Scald. Chill.
Beans, Snap, Green or Wax	Wash. Remove ends. Cut as desired. Scald. Chill.
Beets	Wash and sort according to size. Trim tops, leave ½ inch of stems. Cook until tender. Chill. Peel and cut as desired.

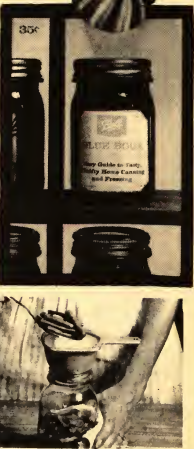
## Ball Blue Book

1966; 100 pp.

\$3.35 postpaid from:

Ball Bros. Co., Inc.  
Muncie, Indiana

SCALING TIME IN MINUTES
Small 2
Medium 3
Large 4
Small 2
Medium 3
Large 4
3
Small 30
Medium 45



## Soap, etc.

### TO DRY CORN FOR WINTER USE

Sweet corn is the best. Husk it. Have a pot of boiling water—put your corn in it and let it boil 3 minutes—then lift it from the pot & put it in pans in a warm oven. It must be stirred frequently, when perfectly dry, put away in bags. When wanted for use, soak it all night, next day boil it in water with a little salt; before serving stir in a little flour, pepper & butter.

### TO FRESHEN WALNUTS

When Walnuts have been kept until the meat is too dried to be good, let them stand in milk & water 8 hrs. and dry them—fresh as new they will be.

### TO MAKE AN IMPROVED CANDLE

Make the wick about half the usual size, & wet them with spirits of turpentine; dry them, before dipping, in the sunshine & the candles will be more durable, emit a steadier & clearer flame.

### WATERPROOF BOOTS

A pint of boiled linseed oil, half a pd. of mutton suet, six ounces of clean beeswax, & four ounces of rosin, are to be melted & well mixed over a fire. Of this, while warm, but not hot enough to shrink much, lay on plentifully with a brush over new boots or shoes, when quite dry and clean. The leather remains pliant. The New England fishermen preserve their boots water-tight by this method, which, it is said, has been in use among them over 100 years. They can stand in water hour after hour without inconvenience.

### TO MAKE SOAP FROM ASHES

To prepare a ley for soap, take a barrel without a bottom & place it on a board that has a trough to convey the water into another vessel cover the bottom with straw, then sprinkle over a couple quarts of lime, fill the barrel with ashes; turn on cold water, a quart at a time—slowly. Continue to turn on water, at intervals of 3-4 hours the 1st, 3rd & 5th days. When the ley becomes strong enough to bear up on, put to 15 gal of 11. Pk. of grease, heated to the boiling point. Stir it for 5 min, every day, till it forms soap. If it doesn't melt week, add a pailful of soft water.

Albert & Cindy  
Bear Lake, Cal.

### WRITE FOR FREE DIRECTIONS FOR SOAP MAKING FROM:

Household Products Dept.  
Pennell Corporation  
3 Parkway  
Philadelphia, Pa. 19102

U.S. Dept. of Agriculture  
Agricultural Research Service  
Clothing & Housing Research Branch  
Washington, D.C. 20255

Madeline G. Salmon  
Menlo Park, Calif.

### NOTES ON SOAPMAKING

1. Never use an aluminum utensil (I've acts upon them). For small batches of soap, enameled or granite ware is suitable and for larger batches, an iron kettle may be used.
2. All grease should be pure and clean to obtain soap with a clean, wholesome odor.
3. Measure accurately. Be careful about temperatures.
4. Ammonia, kerosene, carbolic acid, etc., when added to soap help little, if any, as the water usually neutralizes them. They increase cost and may make soap harsh on skin.
5. Coldness makes a hard, brittle soap.
6. Excess lye makes a coarse, flinty soap that will crumble when shaved. Soap should have a smooth, velvety texture that curls when shaved. It should not beat the tongue when aged.
7. Use the all-purpose soap for toilet soap, a shampoo, for washing prints, lingerie, hose and other delicate fabrics.
8. The following facts (for soapmaking) are listed in the order of their desirability: Tallow, lard and their combinations, olive oil, other vegetable oils. Mineral oils will not make soap.
9. Poultry fat should be combined with other fats, as soap made from it alone is soft and spongy.
10. Aging always improves soap. Soap made from lard or soap that has been boiled requires longer aging before it becomes hard and ready for use.
11. Instead of storing rinds and meats scraps, extract the fat; store in a tightly covered container in a cool, dry place.
12. Make the fat into soap as it accumulates and let the soap age rather than allow the fat to get too old and rancid.
13. There need never be a failure in soapmaking. If separation occurs, it can be reclaimed.
14. Where you find your grease has become rancid or contains materials other than fats, boil in large quantity of water, allow to cool, skim off grease, and then follow the directions in the recipe for soapmaking.



## SALVATION

When everybody was seated they bowed their heads while Doylee asked the blessing. D.R. had never heard his brother-in-law ask the blessing before and he couldn't resist keeping his eyes open to watch him. Marcella had been a church girl all her life, and the kids had been going to Sunday School since they could walk. But the blessing had never been part of bedtime in the house before, and D.R. was a little astounded. What was surprising was the quality of Doylee's prayer. It was short and simple, but for Doylee, strangely articulate and obviously sincere felt. He thanked the Lord for the food they were about to eat, for the house they lived in and the comforts they enjoyed. He especially thanked Him for David's safe arrival, and for the privilege of gathering together as a family once again. Doylee seemed to sense that the ritual surprised D.R., for when he had asked Amen and Marcella started serving the food, he began talking about his recent conversion and baptism into the church Marcella had been attending for years.

"Of course," said Doylee, "I'm new in it, there's a lot I don't understand. But as far as feeling good about something, David, I never felt any better about a thing in my whole life than I do this."

Doylee laughed. "I'm surprised they trust the likes of me with their money."

D.R. laughed at that, and went on to congratulate Doylee on his decision. "But I have to say I'm pretty surprised," he added. "I mean..."

"Honey you ain't a bit more surprised than I am, let me tell you. Why sometimes I even forget I've gone and done it. At work I'll put out a big cue, and along about four in the afternoon I get to thinking how good a big old beer would taste after work. But then I'll find myself in church on Sunday morning, singing hymns and listening to that little preacher, and it's sort of like waking up out of a dream."

D.R. asked Doylee to tell him how he came to his decision. The question embarrassed Doylee a little, and he took a big mouthful of food to keep from having to answer right away. D.R. watched him as he chewed. Doylee had always been very keen as a young man, but in the last few years he'd begun to accumulate flesh around his middle, and in his neck and cheeks. His face was losing its angularity and taking on a roundness that made him seem boyish and middle-aged at the same time. Doylee was thirty-four now, but as he bit down on his food the tendons in his big jaw flexed beneath his skin, and for a second the old toughness, and even manliness, of his youth was restored to his face, and for some reason D.R. found that very moving. He loved Doylee. And he loved Marcella. When he wasn't with them he never didn't think about them all that much. But now, sitting with them in their kitchen, sharing food, looking at their faces, at the faces of the children, smelling the raw, familiar odor of their homes and hearing the old familiar notes in their strange voices, D.R. suddenly felt a little overwhelmed. It was a rush, a strange high that caused tears to work behind his eyes, and some deep longing to stir inside his chest. If D.R. had been called on to speak just then he wouldn't have been able to. Doylee was having his own difficulties speaking, but at last he swallowed his food and in a low and more serious tone he began to talk about the process of his salvation.



## Passport to Survival

If these are your fat years, read this book and lay aside some wealth for the lean. If these are the lean years, here's how to survive them till the circle turns again.

The four foods for survival are wheat, powdered milk, honey and salt—they will keep indefinitely when properly stored. Mrs. Dickey bases her survival diet on these ingredients and enhances them with 40 more supplementary foods varying in degrees of storability and nutritional value. Then she gives more than a hundred recipes that almost all use only these four basic survival foods and water.

There's no question but you'd eat well on this diet. From wheat flour, honey and warm water you can grow yeast and thus make bread. Derive wheat gluten from wheat kernels and eat a very high-protein, incredibly versatile meat substitute. Everything from spaghetti and tacos to puddings and taffy is produced rather miraculously. Supplementing with yogurt (from powdered milk) and bean and seed sprouts gives a fairly rounded regimen.

Emergency procedures and the forethoughts there will serve you come holocaust, catastrophe, or unemployment.

[Reviewed by Hal Hershey]

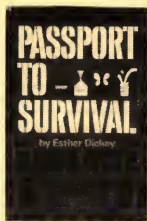
**Passport to Survival**  
Esther Dickey  
1969; 180 pp.

**\$3.95** postpaid

from:  
Bookcraft Publishers  
1848 West 2300 South  
Salt Lake City, Utah

or WHOLE EARTH CATALOG

Fat-free powdered milk, when kept dry and reasonably cool, stores with little change for over 15 years.



Honey has other virtues... As it is essentially a concentrated extract from the plant kingdom, it undoubtedly contains numerous minor components which contribute in some degree to man's nutrition. It will come as a surprise to many to learn that a tablespoonful of honey contains as much vitamin C as a medium-sized apple, and that this same quantity has three times as much iron as the apple. It also possesses the same quantity of protein and nicotinic acid as the apple and a somewhat higher content of riboflavin. Nevertheless it must be recognized that honey, like the apple, is far from a complete food. Its greatest virtue lies in its pleasing flavor.

No. 19. Creme Gluten A La Emergency  
Gluten No. 12b Wheat grass No. 6  
Cream Sauce No. 70

Form the gluten in marble size balls. Bake and simmer in stew broth No. 77. Mince wheat grass grown in soil and cut when 1-1/2 inches high. Add gluten balls and grass to cream sauce and serve immediately.



## Chapter 7 Menu—Saturday Breakfast

Variations:

(1) Mix wheat grass in blender, using as small amount of water as possible. Strain, and add a small amount of the green liquid to the cream sauce. (2) Wrap wheat stems in tiny bundles with noodle strips. Serve in a casserole, covering with cream sauce.

Packing the four survival foods—wheat, milk powder, honey and salt—in five-gallon cans has been a project of different groups who have been awakened to the need for emergency storage. Each can contains one month's food supply for one adult person: 27 lb. of wheat, 5 lb. of powdered skim milk, 3 lb. of honey, up to 1 lb. of salt.

## Butchering, Processing and Preservation of Meat

Vegetarians may turn their heads. (Some visited Kesey while he was slaughtering a cow. "They like to watch the blood gush just like everybody else.")

One advantage of doing your own butchering, you get to thank the animal personally, and see him personally all the way through what you're doing together. There's nothing abstract about it. This book has the whole story. Farm animals, game, fish, canning, smoking, making sausage. How to eat your friends and waste nothing.

—SB  
[Suggested by Jim & Sue Walton]

## Butchering, Processing and Preservation of Meat—

**A Manual For the Farm and Home**  
Frank G. Ashbrook  
1955; 318 pp

OUT OF PRINT

Van Nostrand Reinhold Books  
450 W. 33rd St.  
New York, N.Y. 10001



FIG. 16. Homemade beef hoist. A simple method of hoisting a beef carcass is illustrated in these sketches. A fork or rake handle or gas pipe is slipped through incisions between tendon and shank bone; ropes are suspended from one limb or other support (wide apart at top) to height of hocks below. To free ends of rope are tied short sticks, or 2-foot pieces of broom handle, or equally strong material. These are placed inside the shanks and are used as levers for winding up ropes around fork or rake handle, as shown. Two men wind up the rope around pipe or handle. When beef is at right height, another rope or handle is laid across between ropes and ends of sticks to prevent unwinding. As the beef is raised the legs are spread farther and farther, as desired.

## Comment on Ashbrook

If you are going to go native or at least semi-fringe, you had better figure out a way of brining Safeway to the price of a pork chop. In other words, if you are going to brat the system, Ashbrook's book will show you how. (At least in the meat department.)

Want to butcher a steer? He tells you how to do it in the minute detail you need if you have never done something like this before. Some goes for hogs, sheep and lambs, game animals and poultry and wild fowl.

After you have the animal cut up he tells you how to freeze it, can it, salt it and even smoke it. Want to make your own sausage? He tells you how.

This is the most complete book I've ever seen on the subject. From how to select the right knife to what to do with all the left-over fat (make soap with it— he shows you how).

Ashbrook knows what he is talking about, 40 years as animal husbandman and biologist with the U.S. Dept. of Agriculture and Interior. You can forget about all those 15-cent pamphlets from the USDA, this one book is all you need.

Arthur Keim  
Colfax, Washington

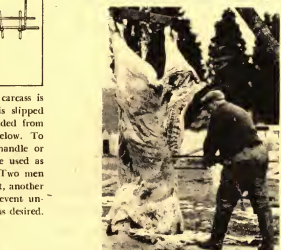


FIG. 69. Sawing the hockbone.



FIG. 27. Sticking the hog on the ground. The feet and legs of the man holding the hog are pressed against the shoulders of the animal to prevent it rolling.

## A Complete Guide to Home Meat Curing

Brief run down on butchering, details on various curing methods. Morton also has various sugar cures, meat pumps, etc.

—SB

## A Complete Guide to Meat Curing

1969; 42 pp.

**\$1.25** postpaid

from:  
Morton Salt Company  
110 North Wacker Drive  
Chicago, Ill. 60606

Cured Domestic Rabbit. Rabbits can be cured whole or cut in pieces. Wash rabbit and place in a clean container. Make a curing brine by mixing 1/2 cup of Tender-Quick in 2 cups of water. Pour enough brine into the container to completely cover the rabbit.

Allow to cure 24 hours, then take it from the brine, wash, and it is ready to cook. If it is not to be cooked immediately, place in the refrigerator and keep within 3 to 5 days after it is cured.

Cured rabbit may be fried, broiled, baked or stewed.

Tender-Quick brine draws out the blood, firms the meat and improves the flavor.

Wild rabbits and small game placed in Tender-Quick brine before being cooked will have an improved flavor and it helps reduce the strong game taste.



## Quaker City Hand Grain Grinder

We've switched our loyalty from Bell Grinders (good meal, but no flour) to Corona Mill (flour on two grindings) now to Quaker City (flour on one grinding). The new champ, better bits, finer adjustment.

**\$11.95** plus postage

from:  
Nelson & Sons, Inc.  
P.O. Box 1296  
Salt Lake City, Utah 84110

or **\$15.00** postpaid  
from WHOLE EARTH CATALOG (\$12.00 in the store)



## Atlas Juicer

I want to inform you and hopefully through you, your readers of a top quality tool for sustenance and nourishment. I enclose descriptive material on both models manufactured by Juice Master who is a little-head-of-firm that produces top quality farm equipment.

Either the Atlas Juicer or the Atlas Princess are far superior to any of the juicers now on the market such as Braun. The Atlas costs more but the value is there in terms of materials used (no plastic) and the construction (10 year guarantee on the Princess and a lifetime guarantee on the Atlas Juicer).

We now have used a Princess model for one year and find ourselves appreciating fruits and vegetables in a new and exciting way. Our diet has been improved manifold and we now savor drinks ranging from carrot and cabbage juice to grape and apples juice.

For people living together it will be a useful piece of equipment.

Note, that although the retail price is high, it is extremely fair given the quality of the item. In addition you can buy either model at a discount if Juice Master does not have a sales representative in your area. Further reductions in price are available if you want to become a dealer—by simply ordering three units.

[Suggested and reviewed by  
S. L. Faber]



## Atlas Juicer

**\$149.95**

(Princess model \$99.95)

from  
Juice Master Mfg. Co.  
604 W. Muller Road  
East Peoria, Illinois 61611

## Tutti-Frutti Steam Juicer

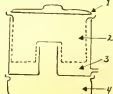
One nice advantage of steam-juicing fruit and vegetables is that the residue is still palatable. So's the juice.

## Tutti-Frutti Steam Juicer

Aluminum \$32.00 postpaid

Stainless Steel \$62.00 postpaid

from:  
Bernice A. Andersen  
324 East 400 North  
Logan, Utah 84321



## Lee Electric Four Mills

The best bread is made from wheat ground just before baking.

This is a small electric grain grinder manufactured by an old dependable company. A unique feature of this machine is that it grinds the entire grain kernel, including the germ and bran, into fine flour. (Other mills generally discard the germ). You fill the hopper and an automatic feed admits the proper amount of grain into the stone grinding chamber. The carbide grinding stone never needs redressing, the mill does not get warm enough to impair the nutritional value of the flour, and fresh stone ground flour... pass the bread!

[Suggested and Reviewed by Lloyd Kahn]

## Meadows 8" Household Stone Burr Mill

Considering the cost of an electric mill such as the one sold in the store this item is high. However the Lee mill will grind only a small amount of flour and is slow for use in a community mill such as this mill would be ideal for. It will grind a hundred pounds of fine flour an hour. Such a community mill or a small co-op could supply a community with organic whole wheat flour for 6 to 8 cents a pound, depending on their source of wheat berries. Deaf Smith County wheat berries are 6 cents a lb. FOB Hereford, Texas. Freight on wheat is funny. The best I can figure out is that it would cost about \$1.00 per 100 to ship it from Hereford to SF; if and only if you buy one complete truck load so only wheat can be in the truck if the truck contains wheat. Trucking companies say wheat is "exempt" and when you deal with wheat you are dealing indirectly with the Govt.

[Suggested and reviewed by  
Jerry Walker]

**\$245.00**

Meadows Mill Co.  
North Wilkesboro  
North Carolina

## Big Bell Grinder

You might be interested in the C.S. Bell mill model 2 (2MC). In your very first issue you showed the small Bell mill and then later replaced it with the Corona grain mill. The Corona is far superior to the small Bell mill but the Big Bell (No. 2) is far superior to the Corona. And far more expensive: about \$350.00 as opposed to \$15.00. But well worth the money. On the East Coast it is distributed by the Erection Trading Company.

And an excellent book is *The Soil and Health* published by Devin-Adair. This is a classic work in the field of organic farming by Sir Albert Howard. Howard also wrote *An Agricultural Testament* and was the major influence on J.I. Rodale among others. Along with Plowman's Folly and Farmers of Forty Centuries (and the long out of print Topicalization) one of the indispensable written works in the field.

Jimmy Silver  
Boston, Mass.

(See p. 46)

## German Steam Juicer

I have something you might be interested in—I had been looking for it myself, ever since we arrived on it after WWII in Germany. It is most ingenious. We used it on an iron stove—in the clipping it gives two prices—one for gas, one for electric—but I am sure it can be used on a woodburning or whatever other stove as well. We even sliced or chopped sugar beets and used this juicer machine to make out the juices completely, then we simmered these to make a great soup, without all the extra water to boil out, as you would if you cooked the beets the conventional way. The juicer is so simple: in the upper part goes anything you want to juice—it just simmers away, and out of the siphon tube comes the clear natural juice at its neigest. It can be carried right into garages or bottles. Rhubarb is delicious, even to people who usually don't like Rhubarb.

I wrote of a California Confection imports (manufacturers) these, so I am not trying to translate the German but if you want you can send for the english brochure and directions from them.

Hoping you can use this—I am sure using mine.

Edge Chase  
Red Oak, Iowa



## Catalog

free

from:  
Lea Engineering Co.  
2023 West Wisconsin Avenue  
Milwaukee, Wisconsin 53201

## OUTPUT PER HOUR

Model	Motor Size	Fine Flour	Coarse Meal	Price
500	1/6 hp	3 to 5 lbs	not adjustable	\$95.00
600	1/6 hp	3 to 5 lbs	20 to 25 lbs	\$125.00
\$500	1/4 hp	6 to 10 lbs.	not adjustable	\$145.00
\$600	1/4 hp	6 to 10 lbs	40 to 45 lbs	\$170.00

Operating Voltage 115 AD-DC  
Current Draw 3.0 amperes  
Overall Height 20 inches  
Shipping weight 20 pounds



## DOYLE'S STORY

"I think the thing that finally got me serious about it, David, was my brother Clarence getting killed in a rock fall, down home, back in this spring. I don't know if you ever knew Clarence or not..."

"I remember him," said D.R. "He used to work at Blue Diamond."

"That's him" Doyle went on. "Older than me, and not so long, as he used to say it. Of course it's been a while since he worked at Blue Diamond. They shut down over there right after we all moved up here. I remember that because Clarence came here to live a while, but he never liked it enough to stay, and for the last nine, ten year he's been in and out there little old dog-hole mines, mostly over on Second Creek, and for a while there on Traca Fork till they stripped it. He was working for the Combs brothers over on Second Creek last March when a piece of rock fell on him. The whole rock caved in and crushed him, just like that. He never drew another breath after that rock caught him. "I didn't know that, Doyle," D.R. said solemnly. "I'm sorry to hear it."

"Well, it was a sad time, I tell you I was," said Doyle. "It like to broke poor Mommy's heart. She was his favorite, you know. He was her first, and he lived there next door to her, and dotted on her, and took care of her, him and Carlena. It was just the worst thing that could have happened in Mommy's life, and there it was, he died just all of a sudden, and there wasn't a thing on earth anybody could do about it except bury him."

"Clarence's funeral was the saddest time," said Marcela. "Awful sad," said Doyle. "Just awful sad. We went home for it of course. You remember the church there at the mouth of the creek, I guess. I doubt they's over twenty members of that church left around there, so many's moved away. But for Clarence's funeral it was full, people come from far away as Hyden, and Hazard. They was one of his old army buddies from Pike County heard about it and come. Brother Fugate preached, and there was singing, and old Mr. Stacy got up and preached some too. What was bad about it though, as far as Mommy was concerned, was Clarence never had been saved. And so naturally there was a lot of talk about the rest of us. Mommy cried and cried, and pleaded with me, and my brother Lee. She cried all weekend and pleaded with us to join the church. I don't know if you remember Lee or not, David..."

"I remember him," said D.R. "I remember all these people. Brother Fugate baptized me and Marcela right there in Traca Fork. I sure remember him."

"Well," Doyle went on. "You can imagine how it was. To please Mommy, and ease her all I could, me and Lee promised her we'd think about it. I don't know what Lee's done, I ain't heard from him since the funeral, but I got back up here and that whole business was all I could think about. But the funny thing is, although I wouldn't want Mommy to know this, it really wasn't anything that she said that made me change my mind."

Doyle paused then to eat some more, and take a drink of milk.

(continued)

ROBERT'S MERCHANDISE CO.

801 Howard Street San Francisco, Calif. 94103

Grinders & Juicers  
Community

199



## Paprikás Weiss Gourmet Shop

If a bunch of people are eating out of one kitchen where you are, it may be worthwhile to treat yourself to some gourmet equipment. Whether your scene is a logging camp, movie company, revolutionary cell, or country commune, the best way to attract and keep good people is with outstanding food.

(Suggested by Lank Felsen)

### Catalog

\$25 postpaid

from:  
Paprikás Weiss Importer  
1946 Second Avenue  
New York, N.Y. 10028



No. 5220

Chrome plated, black plastic handle. \$1.50



No. 201

### FRENCH STYLE INSTANT BREWER MAKES REAL COFFEE IN 30 SECONDS

Measure in coffee. Pour in boiling water. Insert pressure plunger. Let stand from 30 seconds to 1 full minute. Dispense on desired strength. Push plunger to bottom and pour. It's as easy as that with the instant brewer. No heatproof Corning glass with stainless steel working parts. It also makes superior iced tea, can be used as a martini stirrer. 1 to 6 cups. \$13.95 each

### HOW TO GET A CHERRY STONED!



No. 500

It looks like a Rubie Goldberg contraption and operates with the efficiency of a push-button machine. All you do is fill the hopper with cherries and turn the crank. The stone rolls out the end and the pitted fruit pops out from the center. Cherries are never bruised. And not a single pit is missed. Heavy-tinned metal won't rust. \$12.95 each



No. 391

**DOUBLE-BLADED CHOPPER**  
Two blades make the job twice as fast  
Stainless steel with easy-grip metal handle.  
\$2.95 each



No. 481

**PIANO WIRE WHIP**  
Stainless steel for heavy-duty beating  
Available in 12" size \$4.95  
14" size \$4.95



### COUSCOUS' COOKER

This is a modern adaptation of the traditional North African "djem" used to prepare the famous native delicacy. The upper part holds the semi-dry granules and the lower part the boiling water. 6-quart size. \$21.95

**TINNED SAUCEPANS** - 704153 1 1/4 pint size \$5.95; 704139 1 quart size \$7.95; 704138 2 1/2 quart size \$9.95 Preferred by chefs because of their excellent heat-conducting qualities, these pans add to the home cook's skill also.



No. 197

**TURKISH COFFEE MAKER** - Imported Authentic equipment for making thick, aroma-laden Turkish coffee. Polished Heavy-weight Aluminum long handle. 3 cup \$4.98 6 cup \$7.98



### No. 353 HEAVY DUTY SAUSAGE STUFFER AND FRUIT PRESS

A home sausage factory in one heavy steel machine. Designed to fill and case sausages with one turn of the handle. No air can ever enter casing - nothing goes in but your own stuffing. Can also be used as a fruit press. 6 Quart capacity. \$68.95 each

## French Cookware

Equipment: No matter what kind of cooking you do, French cookware is unsurpassed both from a scientific and aesthetic point of view. E.C. Pots are 1/8 inch thick copper, 10 times. Why? High heat conductivity (little heat wasted in heating the pot compared to iron, even heating (no burning on the sides in aluminum). Good enthalpy (keeps warm for a while after cooking etc.). Metal sources (your three all E. cost). Le Cuisinier, 903 Madison Ave. N.Y. N.Y. 10021. *Restaur de La Cuisine Inc.* 160 E 55th St. N.Y. 10022; *Basar Francois* 666 6th Ave. N.Y. N.Y. 10010. All three shops issue free catalogs.

Surprised that with your emphasis on self-education, you don't have 10 more on correspondence schools. You learn at your own pace, the schools take all the work out of separating the wheat from the chaff in any field. The teacher roars you by name. Etc. A possible good first entry: *National Camera Repair School* 5000 W. Union Ave. Englewood Colorado 80110 Alton ICS, Scranton, PA 18515. Over 400 courses including a lot on construction which WEC's seem to be interested. The accrediting agency of correspondence schools is National Home Study Council 1601 18th St. NW, Washington DC 20005. It issues a free list of accredited schools.

D. Mayerson  
Flushing, N.Y. 11355

ETS. E. DEHILLERIN. There are kitchen-equipment freaks, just as there are stationery freaks, and we should indulge them. Dehillerin indulges them beautifully (and, by the time you finish paying the freight, expensively). But write to 18 Rue Coquillière, Paris, and we will let you know. Sieves, grinders, broilers, boilers, whisks, special deep pots, shallow pots—anything you have ever wanted is there. They'll even send a kind of packet of loose pictures that looks like a child's alphabet primer.

Stephen Chodorow  
New Milford, Conn.

## Country Kitchen

Some of their stuff is eye-wash junk. Some is good.

Catalog \$1.00

Country Kitchen  
270 W. Merrick Rd.  
Valley Stream, NY 11582



From: Iron Ware

**UNIVERSAL SHARPENER**  
European Import that sharpens every known type of blade: Serrated, scalloped or straight.  
2969 - Sharpener .... \$1.15



### Professional DEEP-FRYER

Heretofore exclusively available to fine restaurants, this heavy-duty all steel duo will turn out everything from browned-to-turn chicken to crusty, light-textured doughnuts. You get a long-handled pan that is 8" in diameter, 4 1/2" deep, plus a long-handled wire-mesh basket that hooks onto the pan's drain. Potatoes, shrimp, crullers, etc. will deep fry quickly, easily and deliciously.

2115 - Deep Fryer with Basket \$9.98

## Cross Imports

Another gourmet cookware catalog. Looks like good prices.

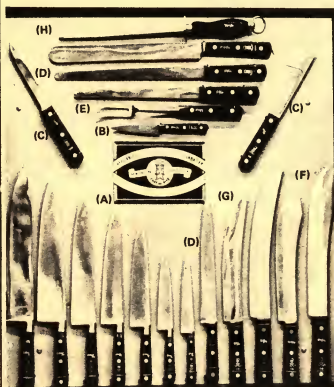
—SB

(Suggested by Muffy Anderson)

### Catalog

\$0.25

from:  
Cross Imports, Inc.  
210 Hanover St.  
Boston, Mass 02113



From: Iron Ware

## Iron Ware

No. 1 item in my kitchen is my iron ware. I wouldn't be without it. *Frying pan all sizes, some with covers (they have both glass [12.00 to 14.00 ea] and iron. I recommend iron for financial reasons, the glass breaks easily), griddles, chicken cooker, deep 3" frying pan & cover, Dutch oven with cover.*

It is easy to care for & with proper care they will last a lifetime or more. I'm using my mothers frying pan which is now 45 years old. Ironware is available in most large discount stores and in most surplus stores. The surplus stores usually have the best selection but are sometimes higher priced.

The two major producers are Griswold Manufacturing Co. and Wagner Ware both of Sidney, Ohio. They both have fine brochures and instruction sheets for care and use. They are glad to send these on request. Here is an info sheet (extra) from a pin in my local Alpha Beta.

No. 2 is cookie/bread sheet. It is steel and does not buckle in oven like aluminum. They are available through Country Kitchen, 270 W. Merrick Rd., Valley Stream, NY 11582. They sell for 2 for \$3.50. You do not have to grease but they are not teflon. Browns so evenly and beautifully. C.K. carries all types of kitchen ware some expensive & not really necessary but others unique and reasonable.

Ed: Lyle  
Laguna Beach, Ca.

## Roth

Nifty gourmet items.

H. Roth & Son  
1577 First Ave.  
New York, N.Y. 10028



(Q) No. 5220 Bread Mixer. The easy way to mix dough for bread, recipes inc. 3 gal. cap. \$14.98.

## Braun Appliances

As far as "things" are concerned, I think that BRAUN appliances are out of right, they are very streamlined, practical and usually inexpensive by comparison to other products of the same type. For example, their \$10 juicer (juicer) \$1 really works up as well as other \$150 models on the market. Their \$10 automatic toothbrush is a wonder. They are made in Germany. A mail order list.

Braun North America  
56 Cambridge Parkway  
Cambridge, Mass. 02142 (catalog free)

Jo Ann Alpers  
Sun Valley, Idaho

## Fleming Bottle and Jug Cutter

The bottle cutter makes a practical tool. By following the instructions and with some practice anyone can turn out interesting glasses, mugs and vases. The kit will cut anything from an eight ounce bottle to a 5 gallon jug. We don't even take back bottles with deposits anyone. Wine bottles make interesting pilsners. Beer bottles make excellent glasses in sets of six, plus you get to drink the beer. We've given them as wedding presents and people really dig them. If you hate the thought of all that wasted glass like I do, you'll write to Floyd Fleming. His instructions are personable and informative.

[Suggested and reviewed by Pat Milberry]

## Jug & Bottle Cutter

\$9.95 postpaid

from:  
Fleming Bottle & Jug Cutter  
15843 Pacific Highway So.  
Seattle, Wash. 98188

or WHOLE EARTH  
CATALOG

The trick is to tap  
the bottle from the  
inside, that way the  
bottle doesn't break.  
(L to R): cutting,  
tapping, finished  
product.



## Hand Washers

A BEAUTIFUL WASHING MACHINE IS  
MADE OUT OF USING A "PLUMBER'S  
HELPER"—PUMPING IT UP AND DOWN  
IN ANY SUDSY LAUNDRY CONTAINER  
FROM BUCKET TO BATHTUB

NORMAN SOLOMAN  
BERKELEY CALIF.

We asked Dale Fritz, a Peace Corps agricultural specialist and former Volunteer for Technical Assistance (VITA), who has years of experience overseas.

As it turned out, Fritz himself is the father of a simple hand-operated washing machine that has been featured for years in the Agency for International Development's (AID) *Village Technology Handbook*. What is the operating principle of the machine, we asked Fritz.

"Agitation, just agitation," he replied.

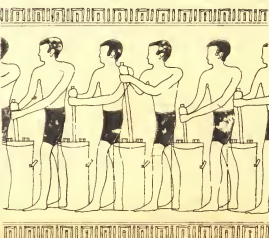
"You could take a stick and stand there and stir it," he added, "it's just the motion of the water. The clothes don't even have to move at all... It's just the water moving back and forth through the clothing that does the cleaning. The soap breaks down the dirt; and the water carries it away."

Well, we asked, if that is the principle, are there any other solutions to the washing problem that are simpler than yours?

Sure, he said. If you have a vehicle, throw your clothes into some kind of a closed container—like a milk can—add soap and hot water and put the container onto the back of your machine. Leave it there all day as you make your rounds—preferably over the roughest available roads—and when you get back in the evening you'll have a load of clean clothes.

That method has been used by bachelor ranchers in the western United States for years.

From *Volunteer Magazine*  
Published by the Peace Corps



## Ice Cream Freezer

I'm sure there are many lovers of home-cranked ice cream (and who isn't one?) who have been somewhat dismayed at the chintzy ice cream freezers now being turned out with their predominately plastic parts. These people can now write for info and prices to the White Mountain Freezer Co., Winchendon, Mass. 01475 and be sure of getting a solid, quality piece of machinery that will last for years. There are two models available, the Mod. 643 White Mountain triple-motion, in sizes from two to 20 quarts and whose folder I have enclosed, and the Mod. 642 Arctic double-motion in 2, 4, 6, and 8 quart sizes.

I have never seen these freezers sold in the mainland U.S. though when I was in Puerto Rico in 1964 on a school trip I saw them in various hardware stores along with kerosene lanterns and stoves, and treacle-dried Singer sewing machines (new ones). Often in San Juan one would see a street vendor with two of the large 20 quart freezers mounted on his pushcart selling nickel cups of ice cream to passers-by.

William M. Fletcher  
CINC PAC FILM Bond



## Garbage Divertor

One of the handiest gadgets in electric kitchens, as any upper middle class housewife can tell you, is the garbage disposer. Chuck onion peels, egg shells, moldy yogurt, etcetera into it, flip the switch, and presto! All the stinky wet garbage disappears down the drain, born by clean water.

As the ecologically enlightened know, that stinky garbage is also potentially rich golden soil. There is something in my Scot's cells that rebels against this kind of waste. So the other day I asked a mechanic friend to create for me a device I had designed to capture the ground-up organic material before it goes down the drain. He did it. Now I am using the disposer's ground-up output plus the water in my garden instead of running it out into Bolinas lagoon.

I call the gadget Margot Doss's Little Jim Dandy Garbage Divertor and have applied for a patent.

The gung-ho back-to-nature buds may shrill:

1. That it uses electricity
2. That you can do the same thing in a blender
3. That composting does the work in time

The answer to all these is yes, of course. Apart from that, a blender must be cleaned after every use, and the gunk that comes out of the Divertor is ground so fine it speeds up the composting considerably. I hope the Little Jim Dandy Garbage Divertor will introduce a lot of people to the mystique of organic gardening.

I expect to be able to put together the Diverters for less than \$10 each, if there are 5,000 orders. If there are more, the price will go down a little because quantity buying should make a difference.

If your orders seem interested, I will also sell the plans for one and a 1/2" x 1/2" x 1/2" plastic container a reservation on this trip should send a self-addressed legal sized envelope and \$1 to Little Jim Dandy Garbage Divertors, Box 447, Bolinas 94924. Or a remittance. Depending on whether he wants to round up the raw parts himself or have us do it.

Cordially  
Margot Patterson Doss  
Bolinas, California

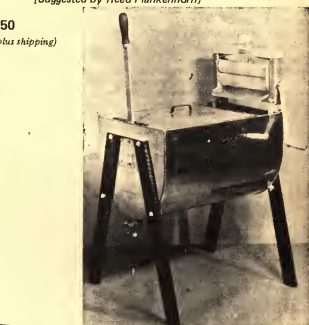
## James Clothes Washer

I don't know anybody who's used one of these. It looks like it would do the job. May need a little bracing, the legs are flimsy.

—SB  
[Suggested by Reed Plankenhorn]

James Washer \$41.50  
Wringer \$16.05 (plus shipping)

from:  
Eden Metal Products  
RR No. 1 Box 57  
Topeka, Indiana 46781



## Ultra-Sonic Dishwasher?

The home dishwasher probably washes as much or more water than a garbage disposal unit. Certainly it can be improved. Watchmakers and jewelers are beginning to use small "ionic cleaners" that clean watches and include with high-frequency sound waves. Why can't a dish washer be built on the same principle?

Bill Mariano  
Ridgely, PA



"Doyle started having dreams," said Marcella. "I did," said Doyle. "It was the unusual thing that ever was. After we got back from Clarence's funeral I commenced to dream about him ever night. And if it wouldn't be him it would be somebody else that had died. My father, your father, or somebody in my acquaintance whose death I knew something about. It was just death where I looked, it was all I could think about. I got afraid I was going to die, or Marcella, or one of the kids, you can ask Marcella here, it was really a awful thing to go through. Nothing like that had ever happened to me before, and I just couldn't understand it. Ever night I'd go to bed and lay there all night thinking about death and death people and dying and I think: well surely I'll get over this tomorrow. But then when I'd get to work there it would be, right up in front of my mind, I couldn't hardly work. Vernis noticed it and asked me about it. Some of our customers even noticed something was wrong. This all went on I guess a month or more till finally I just had to do something about it. And so Marcella called her preacher up and asked him to come over and talk to me about it." "He's a real nice man, David," said Marcella. "He's from Kentucky too, just smart as a tack. You'd really like him." "Half of Cincinnati's from Kentucky," said Doyle. "This is briar-hopper country sure enough." "How well I know," said D.R. "I'd say it improves the place about five hundred per cent myself," said Marcella, and everybody came out of their seriousness to laugh hard at that.

When they'd dashed, D.R. asked Doyle what he had said to the preacher.

"Shoot," I told him the truth of it. I told him I thought I was going crazy. I said I was having dreams and couldn't sleep and couldn't work, and terrible headaches. I told him I was afraid I was about to die. But that little preacher was the sweetest to me that you ever saw. I was about half embarrassed to be talking to somebody about that kind of stuff, but I mean he seemed to know what was going on in me even before I told him. He asked me if I was a Christian. I said no. He asked me if I'd like to be one. I said I hadn't thought about it. You know what he did when I said that? He bust out laughing. Just laughed and laughed and laughed. I didn't know what to think. Then he said, oh yes you have. I said what do you mean? He said oh yes you have been thinking about it. Then suddenly he bust laughing and looked me right in the eye and said, what are you afraid to die for? I said ain't everybody? He said we ain't talking about everybody, we're talking about you. What are you so scared to die for? What makes you think that's so awful? And just about the time I began to wonder if he was crazy why he got out his bible and commenced to read about Jesus, and about dying, and about being reborn, and I began to see what he meant. He must of talked to me two or three hours that night. And the next night, and the next." "He stayed till two o'clock in the morning one time," said Marcella.

"He can just talk rings around you. He can say stuff you think ain't never been said before, he's really clever. He come over the night to on Friday night, and guess what he said. He said he wasn't going to come see me no more. He said if I wanted to know what he had to say he was preaching ever Sunday morning at eleven o'clock, and for me to be there. And I ain't missed a Sunday yet. And after three times I confessed, and then about a month ago they baptized me, and I've slept good ever since."









## Nippa Sauna Heater

The Japanese-type bath, with a wood-burning firebox, is excellent, but the fireboxes are hard to make and impossible to buy from Japan. The Japanese bath also uses a lot of water, which can be a problem if you have to pump or carry water any distance.

One answer is the sweat-lodge/sauna. An earth-lodge will do, or better a cedar-lined room with a high bench and a drain in the floor. Carrying hot rocks can be tiresome; the best arrangement we've found is this wood-burning sauna stove made by the Nippa company in Michigan. We use the WC 22 model, holds a lot of wood, heats 15 gallons of water to a rolling boil in 20 minutes, heats the rocks on top at the same time, doesn't use much wood actually, and keeps the sauna room hot for hours. Expensive, but will last several lifetimes and keep maybe 2 dozen people clean & happy.

Out of 25 companies contacted, this is the only wood-burning sauna heater located.

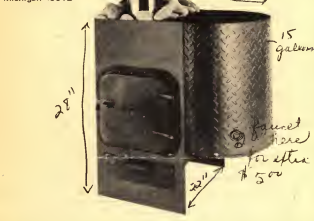
[Suggested and reviewed by Gary Snyder]

WC-18 18" deep \$169.95  
WC-22 22" deep \$189.95

## Brochure

## free

from:  
Nippa Sauna Heaters  
Bruce Crossin  
Michigan 49912



## Aboriginal Sweating

Your suggestions for outdoor living have been extremely enlightening. One suggestion – the aboriginal sweat lodge or sweat-lodge has a long history in N. America and most likely has its adaptive advantages. The Finnish and other similar Scandinavian saunas are perhaps the only extant parallels in the Western World – and unfortunately are costly and require a certain amount of skill to construct. However the aboriginal sweat house takes many forms – all of them easy to construct and if done right have nearly the efficiency of an expensive sauna. I have personally constructed two – after Nez Perce practices – and have surprised many of my friends with their heat-holding capacity. The sweat house ritual is varied and complex – some groups separate the sexes, i.e. don't sweat together (Nez Perce for example); others sweat communally. The social, psychological and physiological advantages of sweating are numerous and not to my knowledge adequately researched (if minimal data is best). This Nez Perce (contemporary) sweat house will sweat four to six:

You need:

- 5-7 green, usually deciduous, poles, approx. 15' length
- 1 ball sturdy twine or if a purist, rawhide strips
- blankets – Nez Perce use blankets of wool, old coats, clean gunny sacks, any pliable insulating material of cloth will do, get plenty!
- 2 pitch forks
- One 20 gallon can – not absolutely necessary
- 2 18"-20" sticks, 1' or so in diameter

**First** – you will need a location near water (usually a stream) – cleared of all brush and undergrowth. An area 30' in diameter will do depending on local conditions. Stream must be deep enough to allow submergence of one's body.

**Next** – shape of wick-up type lodge will be semi-hemispherical about 8' or so in diameter. Construct frame by holding green poles in proper shape over a fire (small) and slightly dry poles which will hold curved shape better. The poles together with twine thereby maintaining shape.

## DIAGRAM #1

**Next** – Cover frame with insulating material – 3 or 4 layers will suffice. Leave no spaces! Lodge must be nearly airtight. I use an initial layer of plastic tarping to aid in heat retention – although I dislike its negative appeal. Leave a door just big enough to enter – you can hitch a cross-piece to the frame of the lodge and hang several blankets off it making sure an adequate seal is formed.

**Next** – dig a small depression inside the door and to the right – this becomes the receptacle for the red-hot rocks. Should be 10" deep and 25-30" in diameter. Line this hole with good rocks (see definition of a good sweat rock, which follows).

**Next** – gather 30 or so sweat rocks. A good rock is hard to find. My best luck has been with slightly vesicular basalt, subangular and about twice the size of a brick. Test rocks by heating over fire to a red hot glow – sprinkle over with water. If the rocks spit and his but do not explode or crack – you may have a good rock. River rocks have been my best source, i.e. subangular basalt cobble. Granite is too heterogeneous.

**Next** – gather wood – the best wood is usually the hardest to procure. Most deciduous wood burns hotter but is harder to find. I use anything I feel right about. Never cut a green tree for firewood or for any stupid reason. Use dead wood, stumps. You need a lot. Build your fire place next to, but not too close to, your sweat lodge, which is hopefully next to, but not too close to, the water. Stack your fire logs, crosscrotching to achieve a sturdy and fairly flat top, on which you evenly distribute your rocks. Fire is fairly big and hence you will need adequate precautionary measures.

## DIAGRAM #2

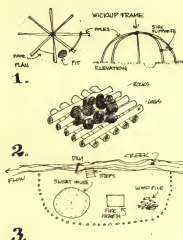
**Next** – light fire – usually takes 45 minutes to an hour or even longer depending on wood. The rocks fall top to the ground and become ash-covered. This is where the pitch forks come in. The rocks should actually be red hot and you will need them to pass the rocks into the firehouse. One individual must receive and arrange the rocks in the receptacle pit so he will need the two sticks. By the way, the house is only about 30" high in the center so this individual is on his knees.

The pitch fork will facilitate cleaning burning ashes and embers from the rocks in the transferring process – these ashes would cause smoke in the lodge. Line floor of lodge with clean gunny sacks – cheap and available at any feed store.

**Next** – enter rocks are in all places, all can climb (in naked of course) and enjoy. The host tends the rocks by sprinkling small amounts of water on top which cause increased humidity. I use pungent water, made by using certain roots, these cause a delightful fragrance I grove on. Sweat house lore says you should be serious or at least not too playful. When you are well heated and feel ready for the water – do indulge. Most serious sweaters detect the plunge into the water and the accompanying sensations to be the best part of a sweating. Three times in the sweat house should be enough – in an effective contrappeto.

An existing sweat house

## DIAGRAM #3



Greg Cleveland  
Albuquerque, N.M.



## Communal Bath

We have been using a "Furo" (Japanese Bath) or (Japanese Bath Ritual) for some time here in Hawaii. The Furo is as old as fire itself for it consists of a large body of hot water and a bucket! The basic principles are as follows:

1. Wash by first wetting oneself with a bucket of water outside the tub.
2. Soap up luxuriantly with soap (as in a shower).
3. Rinse with another bucket of water.
4. Then slip into the furo for a therapeutic spacious bath in sparkling clean water of about 100° Fahrenheit.

The unique advantages of this method of bathing are many. However, the most important are—water economy (5 to 10 gallons per person), the ability of a furo to accommodate several bathers at one time, the establishment of communal bathing rituals so important for the spirit as well as the body.

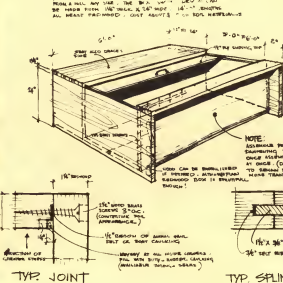
If additional information regarding the construction of communal baths is needed, please write to CBS and Associates, Inc. and we'll be glad to help in any way possible. Also, any suggestions, improvements or information on other existing installations would be appreciated.

Aloha,

Nick Carta

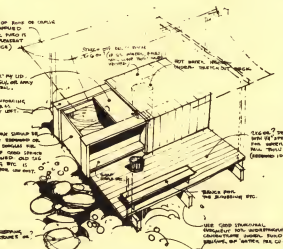
P.O. Box 1041

Kealahou, Kona, Hawaii 96750



## TYP JOINT

## TYP SPLINE JOINT

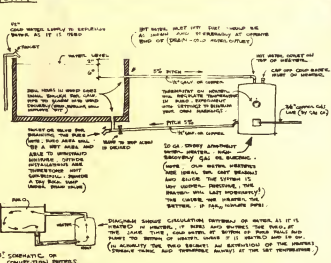


## TYP FURO INSTALLATION

SEE CAREFUL THE INSTALLATION MUST BE IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS. THE FURO MUST BE INSTALLED ON A FLAT, LEVEL SURFACE. THE FURO MUST BE INSTALLED ON A FLAT, LEVEL SURFACE. THE FURO MUST BE INSTALLED ON A FLAT, LEVEL SURFACE.



## SCHMATIC OF TYP GAS HEATED FURO



## The Massage Book

For home, not hospitals (I mean hospitals too if they can afford to get personal). For splendor in the grass. A friendly, exact book from a professional, with all the surrounding information as well as the warm heart of the subject. You don't know what a good massage means until you've had one, and then you want to give one.

### The Massage Book

George Downing  
1971; 200 pp.  
\$3.95 postpaid

from:  
Bookworks  
c/o Random House  
Westminster, MD 21157  
or WHOLE EARTH  
CATALOG

### Sauna

The only book available on Saunas: what they are, their history, how to use and enjoy, and how to build one. Although the construction details are not extensive, there is a list of about 20 Sauna manufacturers who will send you free construction plans, in hopes that you'll buy a heating device from them.

—Lloyd Kahn

[Suggested by Stan Gould]

### Sauna THE FINNISH BATH

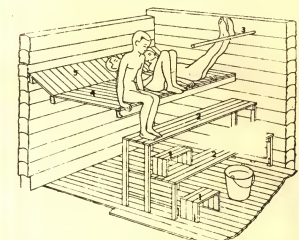
Sauna: The Finnish Bath  
Vierikari  
1965; 87pp  
\$3.95 postpaid

from:  
Stephen Greene Press  
120 Main Street  
Branford, VT 05601

or WHOLE EARTH CATALOG

The simplest form of the family sauna is a one-room hut built of logs, with a large rudimentary stove upon which rocks are placed... The heat of the sauna is non-radiant: that is, it does not radiate directly toward the bather but rather is absorbed by the stones which emit the heat into the air. The indirect heat is gentle and constant... The stones are heated until they become red hot... ideal temperature 190-200 degrees... water is thrown on the stones but the air remains dry because moisture is instantly absorbed by the wooden walls... traditional sauna includes heating with leafy birch branches, washing, and plunging in a nearby lake or roll in the snow outside. Then follows a necessary rest while the body cools down completely.

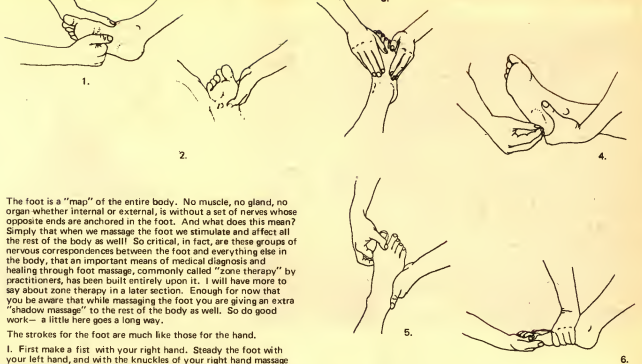
### BUILDING A FINNISH SAUNA



A practical arrangement: 1) small stools used as steps; 2) steps; 3) nail for propping up feet; 4) platform; 5) headrest.

Interior walls and ceiling are often built of kiln-dried, unfinished redwood, which does not shrink, does not warp, and is a poor heat conductor. Another excellent wood is cedar, which not only shares redwood's good properties but also emits a pleasant odor and does not stain with moisture.

Nailing should be done with hot-dipped galvanized nails to avoid stains from rust; nails should be counter-sunk whenever it is likely that a bather will touch them in the hot room. Tongue-in-groove paneling dispenses of this problem in wall construction; benches can be screwed from below.



The foot is a "map" of the entire body. No muscle, no gland, no organ whether internal or external, is without a set of nerves whose opposite ends are anchored in the foot. And what does this mean? Simply that when we massage the foot we stimulate and affect all the rest of the body as well! So critical, in fact, are these groups of nervous correspondences between the foot and everything else in the body, that an important means of medical diagnosis and healing through foot massage, commonly called "zone therapy" by practitioners, has been built entirely upon it. I will have more to say about zone therapy in a later section. Enough for now that you be aware that while massaging the foot you are giving an extra "shadow massage" to the rest of the body as well. So do good work—a little here goes a long way.

The strokes for the foot are much like those for the hand.

I. First make a fist with your right hand. Steady the foot with your left hand, and with the knuckles of your left hand massage the sole. Move your knuckles in small circles; press hard. Be sure to cover the entire sole, including the bottom of the heel.

II. Next go over the same area with the thumbs of both hands. Hold the foot in place with your fingers and work both thumbs at once in small circles. Again cover the entire sole. Go slow. Be thorough. Remember those thousands of nerves connecting the foot with the rest of the body.

III. Next work the top of the foot, using your thumbs in the same way. Again be vigorous and be thorough; don't let any tiny patches escape unmassaged. When you reach the lower half of the foot—in other words when you near the ankle and the heel—you will find it easier to use the tips of your fingers. Circle the ankle bone itself—the round bony protuberance about the width of a half dollar on either side of the ankle—several times with your finger tips, doing both sides at once.

IV. When you finally reach the lower end of the heel, gently lift the foot from beneath the ankle with the left hand and work the bottommost edge of the heel with the tips of the finger and thumb of the right hand. Press hard.

V. Next look at the top of your friend's foot and find, just as you did for the hand, the long thin tendons running from the base of the ankle to each toe. Run the tip of your thumb, pressing firmly, down each of the valleys that lie in between the tendons. Start at the base of the ankle and end at the tiny flap of skin between the toes. As for the hand, you may, if you wish, gently squeeze this flap of skin by pressing the tip of your forefinger against its underside as your thumb passes over its top. Do each valley one time.

VI. Now the toes themselves. With your left hand hold the foot steady; with the thumb and forefinger of your right hand grasp the base of the big toe. Then gently pull, twisting from side to side in a corkscrew motion, until your thumb and forefinger slide off the tip of the toe. Do each toe in turn.

VII. Finish the foot just as you did the hand. Clasp the foot between your hands, one palm along the sole and the other along the length of the top, and for a moment allow yourself to be still. Center yourself and become aware of your breathing. Try by breathing into your hands to allow the energy circulating in your own body to mingle with that of your friend's.

### THE SEARCH IMAGINED

As D.R. pushed through the heavy doors of the terminal he made up a little drama in his mind about how it would be if Estelle was not there waiting for him. He saw himself entering the big waiting room and first looking toward the seats that had occupied that morning. Estelle was not there. The only person in that whole row of seats was a woman with two children, one of them a baby asleep in her lap. D.R. walked by her to the seats they had sat in and paced up and down in front of them, looking at them thinking: Estelle sat here, and I sat there. He looked at the seats, and all around the big room for some sign of Estelle. He considered asking the woman with the children if she had seen a girl in jeans and a Mexican shirt, but she looked as if she didn't want to be disturbed. Her baby was asleep, and she was half asleep herself. For a second in his fantasy the woman with the children turned into Estelle. She didn't stay Estelle very long but for a moment it was very convincing. She had Estelle's dark, round eyes and her skin was dark and mellow like Estelle's. She looked up at D.R. once, sort of blankly, perhaps wearily. Then she was no longer Estelle, which was good because if she had stayed Estelle the fantasy would have ended without the kind of freak-out D.R. wanted to go through over his lost love. He glanced at the half-asleep woman, then walked away quickly to look for Estelle in the coffee shop.

Estelle was not in the coffee shop.

She was not at the ticket counter.

She was not at the magazine stand, or over by the lockers, nor was she outside in the loading zones, leaning against a post. The whole big sleepy bus station yawned Estelle's not being there and closed its eyes again. D.R. tried to wake it up. He tried to force its eyelids open with sticks, and when it yawned he tried to stir it by pouring tar into its mouth. But the mouth slammed shut and swallowed everything that had ever happened until that moment. The hour D.R. and Estelle had been together in that bus station slipped down its long esophagus into subterranean bowels, and no amount of screaming would bring it back again.

D.R. was muttering little fretful cries by the time he went into the phone booth Estelle had occupied. First he went into his own booth, then into her's. But Estelle was not there. He tried calling her, he memorized the number, went back to his booth and dialed. But Estelle didn't answer, and D.R. sat there on the stool muttering little fretful cries. He thought about calling the Anaheim Flash to tell him Estelle was gone, but somehow he didn't have the energy. But then suddenly he did have the energy, and he put in a dime and told the operator to get him the Anaheim Flash in Anaheim, California. The operator got the Flash's number, but a strange woman answered. The Flash was out. D.R. said it was an emergency. The woman asked if she could take a message. No, said D.R. There wasn't any message. But when the woman started to hang up he shouted Wait! Wait! Yes, there is a message. Tell him Estelle's gone. Tell him to find her and take care of her. Tell me where she is. The woman said she would give the message to the Flash. D.R. said thank you and hung up, then sat there muttering little fretful cries as he tried to imagine where oh where in the whole wide world Estelle might have gone away to.

The only place left to check out was the ladies restroom, and D.R. stroiled around to it, and began pacing back and forth outside the door. As women went in and out he tried peering through the door but he couldn't see very much, and the women looked at him suspiciously. Then he thought of a scheme. He watched four women go in, then waited until they came out again. One, two, three, four. Obligingly they came out as they went in, one behind the other, and when number four was out D.R. made his move. He threw open the door and yelled Estelle! He yelled it again, Estelle! Estelle! He ran the length of the ladies room, stopping to peer under the stalls. But Estelle wasn't there, and the only thing D.R. could think to do was go in the coffee shop, order a Coke, play a sad hillbilly song on the jukebox and feel his heart break into pieces.

### Kama Sutra Oil

This material lubricates, warms, feels good, smells good, and tastes good. It's for making love with.

—SB

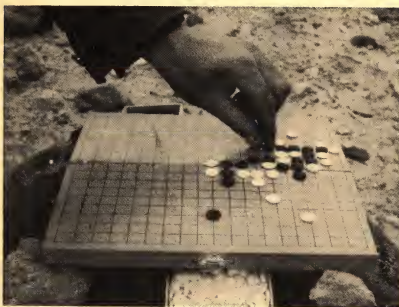
Kama Sutra Oil  
4 oz. bottle

\$4.25 postpaid

from:  
Kama Sutra Om  
1800 N. Highland  
Los Angeles, CA 90028

or WHOLE EARTH CATALOG





**BASIC Y.** The players alternate turns. On his turn a player fills in one region of the board with his color (the two players use different colors). Each player tries to get a "Y" in his color, that is, a continuous area in his color which touches all three edges of the triangular board. The player who succeeds in this wins. Figure 2 shows the final position in five games played on the board shown in Figure 1. In each of the five cases **Y** has won by getting a "Y" in his color.

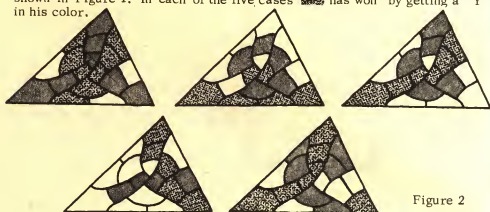


Figure 2

Dear Friends,

— Sep 10, 70

When I opened my July catalog to Fun & Games on p42 and saw the recommended books for Go my hand reached for my forehead and my mouth said "Oh no!" Now while I owe a debt to Lasker & Smith for teaching me something of the game of Go, much better books have become available in English in the decades since then. Sadly, if you look in the local bookstore or in books in Print you are likely to come to the conclusion that the books listed in the July catalog are the only books available.

The better books are available from JAPAN PUBLICATIONS TRADING CO., INC. (and a few bookstores also carry them).

JAPAN PUBLICATIONS TRADING CO., INC.  
1255 Howard St.  
San Francisco, CA 94103

Telephone  
415-431-3394

NY office:

175 Fifth Ave.  
New York, NY 10010

Telephone  
212-OR3-5884

The book to learn from is How to Play Go by Kaku Takagawa, \$12.00.

Takagawa is one of the greatest modern Go players, so that what he says is reliable. Although this book is elementary, if you truly master it you will be able to play a decent game of Go. An important thing to remember when reading it is that if at any point you think what Takagawa is saying is not true, then it is time for you to study the situation in more detail until you find out why it is true.

This next book to study is Go Proverbs

Illustrated by Rensaku Segoe, \$3.00. Go proverbs are a painful way to absorb a wealth of information which will raise your strength considerably.

These two books will cover your needs until you get serious. When you get serious the next literature is in Japanese, although there are a few more things in English. There is Vital Points of Go by Kaku Takagawa, \$3.00. Takao Matsuda offers (or at least offered 7 years ago) an excellent correspondence course with his text and personal instruction. The American Go Association could supply Matsuda's address. I understand there is also a translation of a book by Sakata, another of Go's greats.

If you live in a large city look up the Nippon Club or the Nihon Kisei in order to locate some good players. One should play the best players he can, as playing against other beginners will develop bad habits. Go has a handicap system which allows players of considerably different skill to play.

Last, you think that Go is only a game let me tell you my favorite Go story. Several years ago when I was in Princeton, one of the most promising young professional Go players visited this country to encourage Go playing. He told us the story of how he got to be a professional Go player. When he was a young boy he played much Go and became very good. He decided that he wanted to become a professional, so he went to see a Go master in order to become his student. The Go master played him one game to see if he really had talent. Deciding that he was indeed a promising Go player, he took him on as a student. After that master and student had many sessions together, but Go was never discussed. The subjects of conversation were politics, art, philosophy, etc. Presently the master said that their conversations indicated that the young man now had the depth of view to become a professional Go player, to make certain, they played one more game and, as the master had expected, his student was indeed of professional quality.

In the big envelope I have included my contribution to strategic games. I like to think that Y is inherently even a better game than Go. However, Go has many enthusiasts of people devoting their lives to exploring its possibilities. This gives Go a richness that no newly developed game can ever match. A few enthusiasts from now, who knows?

The rules for Y are all on one page. By all means play the game before reading the rest of the text.

Yours,

Craig Schensted

Craig Schensted

Ann Arbor, MI 48104



Get book of **Mudcrack Y** for \$1.50 postpaid from:

Neo Press  
P.O. Box 525  
Ann Arbor, Michigan 48107



## Boffers

We hereby nominate Jack Nottingham for a Nobel Peace Prize for the first significant advance in weaponry since the encounter group. As Gerd Stern used to say a lot, "contact is the only love," and these foam swords permit contact—with an un-pulled punch and no corporal damage. However the release of interpersonal energy is only one of the uses of boffers. They are a fine game, builder of psychic and physical skill. For one thing you learn about temper: it's an obstacle and a hazard—you get cut to pieces every time. You learn about other stuff as well, no teacher required; the wisdom is inherent in the doing. As the inventor proclaimed at the end of a public boffing match at the Fillmore West: "The sword is mightier than the pen."

—SB

[Suggested by Heliotrope]

Boffers  
(2 foam swords, 2 hand protectors, 2 goggles)

\$11.00 postpaid

from  
Jack Nottingham  
180 Emmet Court  
San Francisco, CA 94110  
or WHOLE EARTH CATALOG

Note: I'd rather boff than eat.  
If you have some skill and we're  
together somewhere, would  
you accept my humble  
challenge?

—SB



## Homemade Cosmetics

Here's an addition for your next catalog: "Here's Egg on Your Face or How to Make Your Own Cosmetics" by Beatrice Truven published by Pocket Books for 95 cents. NY Times says B. Truven is an alien because author doesn't want publicity or the talk-show route... just thinks people can make good use of it. I've tried the Bath Oil... very good/given the Basic After Shave to an unboared friend... good review! "Poussie Calf Lotion"... very much the Alexana Lotion of Alexandre de Marckoff... very good. None of this is miracle stuff it just feels and smells good, uses simple grocery and drugstore ingredients and tools... and you save a bundle of dough. Yet... mightiest is fine but even the catamen and women have a few niceties just for pleasure's sake.

Cordially

Margoloth Roiman  
Chicago, Ill.

## Libre

MAKE AN ALLOY  
MAKE AN INVENTORY  
COME TOGETHER WITH YOUR PEOPLE  
FIND OUT WHAT EACH PERSON CAN DO  
IS WILLING TO DO FOR THE COMMUNITY  
LET EACH MAN USE HIS BROTHER  
LET EACH OF US BE USED  
IN AN ALLOY ALL THE BEST QUALITIES OF ITS  
INGREDIENTS ARE FUSED INTO A NEW SUPER STUFF

THE STRONG EGGS BLEND  
COMING TOGETHER  
ALL ONE

MAKE AN ALLOY  
MAKE AN INVENTORY

TO STOP POLLUTION EACH MAN-WOMAN MUST CLEAN  
UP HIS OWN CYCLES

THE NETWORK OF PEOPLE DOING GOOD WORK GROWS  
IT IS UP TO US TO MAINTAIN CALM & PURE ENERGY  
NEGATIVE THOUGHTS POLLUTE OUR SURROUNDINGS

## BUILDING YOUR OWN DOME

To build a dome first you find the spot/make sure it is your spot! the best place for you to be/then you drive a stake into the ground in the centre of your spot/tie a string to the stake decide what the radius of your home is to be/measure the radius on the string/scribe a circle on the earth using that radius/If you are building a 2 phase dome divide the circle into 10 equal parts (for a 4 phase dome divide circle into 20 equal parts)/drive a stake into each of the 10 or 20 divisions on the circumference of your circle/dig a hole 2 1/2 to 3 feet deep at each of the 10 or 20 points/the best way to dig holes—drive 1 1/2 inch pipe into ground 3 feet deep at each stake with sledge hammer/put 1/2 stick 40K dynamite primed in hole made by pipe/boom—nice hole! clean out with post hole digger.

Get creosoted RR ties or telephone poles/these can be scrounged! place one in each hole set one piling perpendicular to earth using level/rule nail 1/2 way into top center of set piling/measure from nail in set piling to set second piling and so on around the circle. Use string level to level piling.

## Porta-Shower

A good bus shower, or for scarce-water situations, or where the river's too cold. You pump up air pressure on the water (2-1/2 quarts), and then it sprays you for a while (6-7 minutes).

—SB



Basic Porta-Shower \$25.95 postpaid

with shower-stall and tub \$39.95 postpaid

from:  
Porta-Showers  
990 Commercial St. No. 6  
Palo Alto, CA 94303

## Waterbaths

It seems silly to me that bathtubs, into which we place our fragile frames, if we have bathtubs, should be made of such hard materials as porcelain & enamel. If we can have waterbaths, we ought to be able to have bathbaths—sort of waterbaths turned inside-out. Do you know of any suitable soft materials, fabrics that withstand repeated wet-dry cycles and still stay soft, cuddly, and clean?

Joe Sonnenman  
Juneau, Alaska



Decide how you want your floor/where you want plumbing—drains—etc. to be/put pilings where necessary to support floor/floor support pilings don't have to be as deep as perimeter pilings/nail floor supports (joists—2 x 8's or bigger) to floor support pilings/deck with whatever's available—we use cull (bark on one side) 2 x 4 good size up.

Cut 3" PUC pipe into 4" lengths/drill 3/8" holes at 5 or 6 equal points on PUC for pentagonal and hexagonal hub/out 2 x 4 structural members to proper lengths and angle/drill 1/4" holes in centers of angled member ends.

Use 3/8" x 2" lag bolts with washers to fasten hubs to members/let bottom members "float" until entire structure has been erected/use ratchet wrenches to screw hubs to members/4 or 5 people can center dome structure on floor/splice dome down to floor.

Cut skin material (exterior plywood—tempered masonite—sheet metal—clothes (very risky) into proper triangle sides/nail skin material to structural member/drill shank nails are best 3/8" skin material is good enough/2" is really good/4" is risky.

Sealing is hardest part of building dome/money methods may be used/ we haven't got a perfect answer so maybe you should experiment with sealers and calks—etc./fiberglass strips and epoxy works pretty good but is brittle and expensive/air and membrane works pretty good but has to be redone every 2 years and is very funny to work with and looks funky/silicone sealant works good but it is very expensive/hypalon and neoprene calks are easiest to work with since they are applied with guns/we've just angled of a material used to cover called fishing boat decks called HI-BALL you use it like fiberglass except tarp is used rather than fiberglass calk/we've also just heard about ferro-cement which sounds like the best system yet/can be sprayed on the plastics are imperfect yet but much work is being done in that direction/plastics will soon evolve into the best and cheapest dome materials.

We use rock wool insulation/full thick (3/8") batts/stapled to the structural members and the exterior skin/one community used perlite for insulation/fiberglass bats also work but aren't as efficient as rock wool bats.

Use 3/4" sheet rock for [obiterated] seams may be taped and spackled or not.

Put in doors and windows any way you like, using structural members as supports for glass and alter structural members to accommodate doors/in all the domes we've had anything to do with, the doors have been different/so there seems to be no set formula for doors and windows.

For covering the exterior skin use epoxy paint—or Aluminium (a trailer paint made of powdered aluminum—astobest fiber and tar)—or a really high quality paint.

For ventilation put 3 or 4 hinged flaps in triangles around bottom layer of dome/these flaps can be sealed in winter/also there could be a vent in the top of the dome (a skylite that opens and closes is one way—a revolving vent is another way) to prevent condensation from forming on inside skin of dome.

Good Luck!!!!



## THE SEARCH

But that was all just a little trip in D.R.'s mind as he pushed through the front doors of the terminal. It wasn't red. D.R.'s heart was not really breaking. His head was, but not his heart. His head was shattering into splinters but his heart was beating on nice and strong as always. He went in the station, checked out the waiting room and the coffee shop, glanced around the magazine stand, and out into the loading zones. He looked around the bus terminal for ten or fifteen minutes, and when Estelle didn't turn up he got in his bus and drove on back out to his sister's house.



## Koehler Method of Dog Training

What you train your dog to do and not to do is up to you. How to train him is this book's entire concern. Koehler is over-argumentative, but his method is well-regarded for effectiveness.

—SB [Suggested by Raul's Pet Center]

## Koehler Method of Dog Training

from:  
Howell Book House Inc.  
845 Third Avenue  
New York, N.Y. 10022  
\$5.95 postpaid or WHOLE EARTH CATALOG



All is in readiness: you've got the mental equipment to start training a dog and to deal with those who would confuse you, your dog at least six months of age the old maxim to "wait till he's a year old" (and the house has been destroyed) has been debunked. So regardless of breed, there is no reason to delay training.

Make sure that your command is really a command, not a request, and that it is simultaneous with your first step. Again, he cannot learn to start on command if you stand there looking at him after you've told him to heel. You're moving, so keep your mouth shut and don't look back. No second commands, no invitational tugs, lock your leash hand to your body, keep your left hand off the leash, and walk. Yanking, backward glances, and cooing gettudes would merely postpone the lesson that your dog must ultimately learn—that HE MUST SOMETIMES DO THINGS THAT HE DOESN'T WANT TO DO. So, if you love your dog, let him learn this inescapable fact early and in the simplest way. Whether it goes against your teddy bear instincts or not, it's the truth.

## POISON PROOFING

The vile names that his deeds call forth are probably taken as a compliment by the twisted mind of a dog poisoner. Convictions seem altogether too few and the sentences for the crime too light. The only source of satisfaction for a dog owner lies in poison-proofing his dog.

The materials you'll need are a low-priced battery-operated fence charger, and enough light, insulated wire to run from where you will conceal the unit to the different areas where you want to protect your dog against eating food. Regardless of the spots where you set the charger, the dog shouldn't see it or hear it and be warned that something strange is taking place. Both the fence charger and suitable wire can be obtained at a hardware store for a price that is small to one who feels the need to protect his dog.

At a place where the dog is particularly vulnerable to a poisoner, it'll make our first setup in your yard. Look your dog up so he cannot watch. Set the fence unit in a place of concealment, attach the ground wire to a pipe or a rod in the ground, and the live wire to the place designated. Run the other end of the charged wire to the spot where you feel someone might be likely to toss a bit of poisoned food. Bare half an inch or so of the end of this wire. On this bare end, stick a bit of meat, or other moist food that would appeal to your dog. Starting an inch back from the food, bend a couple of angles in the wire so that the bare part and the food will be held free of contact with the ground. Turn on the fence charger. Let the dog out into the yard.

Eventually your dog will find the food. If you are watching at its moment of discovery, you'll see that his first sniff will be met with a fat spark. He'll not be apt to try the second sniff, but keep some bait on the hot wire for at least two days. Then change the set-up to another part of the yard. If possible, conceal the wire in heavy grass or cover it with dirt, allowing the tip to protrude to hold the bait free of the ground. This will make the food appear just as though it were tossed over the fence.



When your dog has had opportunity to develop resistance to food found in all areas where a poisoner might toss it, you can supply experience that will make him form an equal aversion to any food offered by hand. You'll need an outsider to help you. Possibly you can exchange services with another dog lover who might want to protect his pet. As with the case of something being found on the ground, run the bare tip of the live wire into the bait. Now, however, it is offered in the person's hand, insulated from his skin by a rubber glove or a bit of cardboard, plastic, or other non-conductive material. Change situations and strangers until you feel that in or out of the house, no one could coax your dog to eat anything he might offer.

## King Solomon's Ring

The classic animal book. Lorenz is a famous student of animal behavior as well as a famous pet-haver.

—SB

King Solomon's Ring: New Light on Animal Ways  
Konrad Z. Lorenz  
1952, 202 pp.

\$1.95 postpaid

Apollo Editions  
425 Park Avenue South  
New York, N.Y. 10016

or WHOLE EARTH CATALOG

Why has the dog the inhibition against biting his fellow's neck? Why has the raven an inhibition against pecking the eye of his friend? Why has the ring-dove no such "insurance" against murder? A really comprehensive answer to these questions is almost impossible. It would certainly involve a historical explanation of the process by which these inhibitions have been developed in the course of evolution. There is no doubt that they have arisen side by side with the development of the dangerous weapons of the beast of prey. However, it is perfectly obvious why these inhibitions are necessary to all weapon-bearing animals. Should the raven peck, without compunction, at the eye of his next-mate, his wife or his young, in the same way as he pecks at any other moving and glittering object, there would, by now, be no more ravens in the world. Should a dog or wolf unrestrainedly and uncontrollably bite the neck of his pack-mates and actually execute the movement of shaking them to death, then his species also would certainly be exterminated within a short space of time.

The ring-dove does not require such an inhibition since it can only inflict injury to a much lesser degree, while its ability to flee is so well developed that it suffices to protect the bird even against enemies equipped with vastly better weapons. Only under the unnatural conditions of close confinement which deprive the losing dove of the possibility of flight does it become apparent that the ring-dove has no inhibitions which prevent it from injuring or even torturing its own kind.



## Animal Veterinary Products

Health products for dogs and cats.

—SB

Animal Veterinary Products, Inc.  
Box 1491  
Springfield, Illinois 62705

## SURGEON'S NEEDLES

3/8 Circle E, Per Dozen ..... \$3.50



## VIP ANTI-MATING SPRAY

Masks odors that attract male dogs.  
Per Can ..... \$1.05

## Bill Boatman & Co.

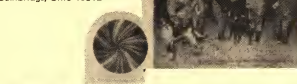
Hunting dog stuff. Collars, pens, training devices, medicines, and co-hunting paraphernalia, such as super flashlights.

[Suggested by Charley Kroner]

## Catalog

free

from:  
Bill Boatman & Co.  
Bainbridge, Ohio 45612



Why try to guess which worm is bothering your dog? Rid him of all three major types—tapeworms, roundworms (Ascariids), and hookworms—quickly, conveniently, and completely. These Kaps are specially prepared in easy-to-use capsule form. Each capsule contains the proper dosage of tetrachloroethylene, arsenic hydrobromide, and mineral oil. Handily packaged in unbreakable, bubble-type container of 12 capsules for easy dispensing. Complete, detailed instructions included.  
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No. 343 Dog Kaps (for larger breeds, 40 lbs. or more) \$1.95 pkg.

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Weights only 3 1/2 oz.



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For those of us whose hearing ain't what it used to be!

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No. 711 Snap-on Nylon Shoulder Safety Sling \$1.00



## HEAVY CHROME PLATED HEAVY DUTY CHOKER

Designed for powerful, stubborn dogs. The extra strong, twist link chain gives control over strongest dog. 12 to 24 inch length, specify size.

No. 476 \$1.29







## How To Live With Schizophrenia

Curable. With medicine. I don't mind quoting from the dust jacket of this one.

—SB

(Suggested by Trisha Masnick)

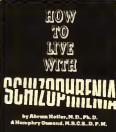
### How to Live With Schizophrenia

Alram Hoffer, Humphry Osmond

\$6.95, 177 pp.

from:  
University Books, Inc.  
1615 Millside Ave.  
New Hyde Park, N.Y. 11040

or WHOLE EARTH CATALOG



This book is addressed to the broad public: to report an important breakthrough in medicine. Treatment of several hundred schizophrenic patients, during twelve years, proves beyond a shadow of a doubt that manic depressive disease improves and recovery of schizophrenics and keeps them out of hospitals. Among acute cases diagnosed in early stages the effect of nacin is usually dramatic and profound. Full recoveries are often made in a few months, hospitalized cases become well enough for out-patient care, chronic mental patients of years standing can sometimes fully recover, and extremely serious cases are improved.

Working with other scientists, the authors have established that schizophrenia is basically a physical illness caused primarily by imbalances in the biochemical balance of the body and that this is determined by genetic disposition.

Evidence has accumulated that schizophrenia may be due to a defective adrenal metabolism which results in production of a subtle poison in the blood of its victims.

In varying degrees, from mild to shattering, this schizophrenic toxin interferes with normal brain function and creates bizarre disturbances and changes in perception, mood, thought, personality so common in schizophrenia.

These two scientists also discovered a new therapy for schizophrenia which relies on a simple, harmless, cheap, and highly effective vitamin—vitamin B-3, also known as niacin, nicotinic acid or nicotinamide. Massive doses—3,000 milligrams per day, or several hundred times the normal dietary requirement—successfully counteracted the schizophrenic toxin.

Schizophrenics Anonymous, the newest idea in treatment of the mentally ill, with chapters in Canada and the United States launched at the suggestion of Dr. Hoffer and Osmond, has proven that "schizophrenics can work together toward solution of their difficulties."

Megavitamin Therapy

Word has been drifting around for some while now about the use of massive doses (like 3 grams) of nicotin (vitamin B-3) as a sanity drug. For example, to help terminate or lighten a bum LSD session. To alleviate anxiety states. To accomplish, with time, possible cure of schizophrenia. This pamphlet has all the basic information you need, including suppliers of nacin.

—SB

### Megavitamin Therapy

20 pp.

\$0.25 postpaid

from:  
Aurora Book Companions  
P.O. Box 9852  
Denver, Colorado 80217

The megavitamin therapy is not intended to cure vitamin deficiencies. For that, smaller, more "lower doses" are needed, and natural vitamin preparations are recommended. Physicians using the megavitamin therapy know that the illnesses treated by it are not vitamin deficiencies.

The megavitamin therapy saved for schizophrenia, autism, hypoglycemia, in alcoholism, anxiety states, malaria, arthritis, epilepsy, hyperlipidemia, hypercholesterolemia, convulsions and LSD poisoning. In the megavitamin therapy the vitamins are used to balance the faulty body chemistry. They were selected because they are inexpensive, can be taken orally, and have no dangerous side effects, even if taken in large doses for a short period, or continuously in the maintenance doses.

## Alcoholics Anonymous

They're good. Check your local phone directory.

—SB

Medical men and scientists have available to them publications by Dr. Hoffer, compiling information from the research in Sakatahewon, and giving results of the clinical trial of massive doses of niacin on schizophrenics beginning in 1952. Now, Dr. Hoffer and Osmond, have written a pioneering work addressed directly to schizophrenics and their families, mental health workers, and the interested lay public.

In clear simple language, the noted doctors cut through the confusion, misconception and myths that have surrounded this disease, obscuring its reality and compounding its tragedies.

This book will be a godsend to many victims of this dread disease, and their families. It is bound to create a groundswell reaction which will give schizophrenics the right to be considered physically ill. Then they can benefit from a society informed and mobilized properly to treat them [for their illness].

### Treatment of Schizophrenia

Perhapp you have been depressed for the past few months. For no good reason that you can think of you suddenly burst into tears, or you have moments of panic you can't explain. Your work no longer interests you. You are fatigued and miserably.

At the same time you may be having frightening experiences such as seeing flashing lights, noticing changes in people's faces, or feeling like your whole body is shaking. Something is happening to you and you have been able or willing to tell you what it is.

Perhaps you are now taking tranquilizers and occupational therapy at a clinic? You are possibly making regular visits to your psychiatrist for deep therapy to "root out the source of your troubles buried in your psyche." Although you are willing to cooperate with your doctor to the best of your ability, you are frightened because you are not feeling any better, and you are convinced that you never will. Or perhaps you have a close relative—a parent, or a child, or a sister or brother—who has, unconsciously, become very difficult to live with? Perhaps he has frequent outbursts of temper and moments of unreasonable suspiciousness. He sometimes says things which frighten you and does peculiar things which seem quite irrational to you. He may be receiving treatment for some vague "personality" or "emotional disorder," but you have noticed little—if any—improvement.

What can you do now? Where can you go for help?

Millions of people all over the world are faced with the same dilemma you face today. There is nowhere they can go for information, and no one who can tell them why they feel the way they do, or what they can do about it. Mental health associations in England, Canada and the United States do not have any literature to which people like yourself can refer.

But for you, for your relative and those with similar problems, help is available. It is up to you to see that you get that help. We will describe a treatment program for schizophrenia which we have developed and found effective in our own work, and which we think is the best available. We must furthermore examine what other members of the treatment team—hospitals, nurses, family, community, and yourself—must play in this effort. For effective treatment of schizophrenia requires all the resources that can be made available to you.

—SB

(Suggested by Barry Stevens)

## Person to Person

Barry Stevens is a lady with one of the best popularization formats going. She's taken significant papers of current action in humanistic psychology, and embedded them in a rich collection of her own non-professional living and applying. The papers are by Carl Rogers, Eugene Gendlin, John Shlien, and Wilson Van Dusen. Most of the experts below are from Barry Stevens.

### Person to Person

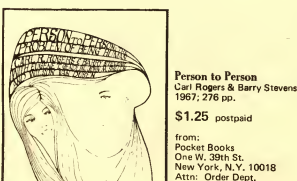
Carl Rogers & Barry Stevens

1967; 276 pp.

\$1.25 postpaid

from:  
Pocket Books  
One W. 38th St.  
New York, N.Y. 10018  
Attn: Order Dept.

or WHOLE EARTH CATALOG



## Phase One Treatment

You have Phase One schizophrenia if you have been sick a short time and you are still able to cooperate with treatment in your own home, and you know that you are not sure you are ill or that you are unable to take your medicine regularly and you are fearful.

You can still be given phase one treatment if you have someone in your family, or a friend who will remind you when you should take your medicine.

We suggest you take either nicotinic acid or nicotinamide as your basic medicine, as both vitamins have the same effect on you. Both substances are B vitamins. Nicotinamide was once called vitamin B-3. Nicotinic acid (this is also called niacin) has an advantage which nicotinamide (also called nicotinamide) does not have. It lowers the cholesterol, cholesterol and fatty acids in the blood. These substances play a role in hardening of the arteries. Since hardening of the arteries (arteriosclerosis) can lead to high blood pressure and senile changes in the brain, it may be desirable to use nicotinic acid in cases where these additional changes are present.

We have to start with one. If we start with nicotinic acid you will be given a prescription for one month's supply at a dose level of three grams per day. They are available in one-half gram tablets. You will take two half-gram tablets after each meal. The first time you take them you will probably have a marked flush. About one-half to one hour after you take the tablets you will become aware of a tingling sensation in your forehead. The flush will vary rarely and you will feel hot and flushed. The flush will vary rarely and you will feel hot and flushed. The flush will vary rarely and you will feel hot and flushed.

You will be uncomfortable the first time and you might be wise to take the first tablets in the evening while lying down in bed. Each time you take the pills the reaction becomes less strong and, within a few days, you will be able to take the medicine regularly, without them. Eventually as long as you take the medicine regularly, you will stop flushing altogether, or it will be so mild it will not trouble you. Some patients like to take the nicotinic acid right after meals. Sometimes patients are bothered by the acidity of nicotinic acid. If this happens to you, you can take one-half a teaspoon of bicarbonate of soda with the tablets. If, however, after you have taken nicotinic acid regularly as prescribed, you are troubled by it, you may be advised to stop it and to take nicotinamide instead. Nicotinamide produces no flush at all, and for this reason it may be preferable for some patients. It does not lower cholesterol, but can cause some nausea.

The treatment you would be on would, in addition, depend on how old you are and what other physical complaints you may have.

Note. The use of nacin is to restore a chemical imbalance. It may take weeks or months to take effect. If it does the trick for you, you will probably need to take it for the rest of your life, like insulin for a diabetic. No drug company is getting rich off nacin (one reason for slow promotion of the treatment in the medical field); it's cheap.

Jim Fadiman told us that a good outfit to get in touch with is the American Schizophrenic Association, 56 W. 48th St., New York, N.Y. 10036. An effective service organization similar to Alcoholics Anonymous.

—SB

I saw the Hopki look at Cab so equally that he drew Cab blood to his own level—precisely, and not one bit lower—so that they seemed to be two people eye-to-eye. I was so impressed by the Hopki's look at the Hopki as though he were some sort of god. The Hopki turned to me with that same strong eagerness in his gaze, and I felt myself being drawn up until we were on the same plane.

You must have a career," they said. I don't want a career," I said. "I want a career, ....

he made the poets whom I knew seem suddenly like phony copies of themselves, as far from real as the man who saw in a Rorschach blot where most people see two men. The shadows of the silhouettes of the ghosts of two puppets."

Abstract talk seems to me not only 'in front of the face' but not even in this room or this world. It is like rumors about something real."

Sidney Cohen says "Our visual mechanism must have evolved with the goal of keeping the organism viable rather than with the aim of seeing things as they are. Do I sometimes see things more nearly as they are? If I do, is this 'hallucination'?"

## JOHNNY HERO

Last week's episode: Thanks to a timely warning by his ever-watchful guardian, Spider Woman, Johnny Hero narrowly escaped being buried alive in an avalanche caused by Trickster, the notorious henchman of the Black Dragon. In a duel fought at the very entrance to the forbidding Cave of Fear, Johnny subdued Trickster and bound him tightly with silver web provided by the ever-faithful Spider Woman. Thus did Johnny Hero overcome another dangerous obstacle in his struggle to liberate the crystal town from the clutches of the Black Dragon, and lift glory from the Land of Mee.

(continued)



## The Stress of Life

It has been suggested that this book be reviewed with the thought in mind of its being included in the *World Book Encyclopedia*. The reviewer has responded that it should be stated that the entertainment value, or readability of this book is high. Further note that according to a quoted reviewer of the book, "it is very readable. . . . You will experience . . . Dr. Selye's persuasive enthusiasm." Yet another (not quoted in the book) says it can be read "with considerable pleasure." And thus speaks (also quoted) the *Library Journal*: ". . . orchids upon this . . . incomparable exposition. . . ."

In re-reading—this applies chiefly to the first 4/5ths of the volume—a word about the nature of the book also upon what the reader does with it. Dr. Selye optimizes the relevance to independent education in his dedication: "This book is dedicated to those who are not afraid to enjoy the stress of a full life, nor too naive to think that they can do so without intellectual effort." So let us now say that criteria 2, 3, and 4 have now been met.

In order to determine if the book meets criterion number one as well, let us first quote the author, "I . . . recommend that only physicians, or readers who are at least reasonably familiar with current theories of physiology and medicine, should read this book from cover to cover." He directs the rest of us to call in first read *V* the volume is divided into books I-V in call in small installments of . . . ten to twenty pages at a time, then it turns out that book V contains ". . . the practical implications and applications of the stress concept in everyday life. . . . Hence, criterion number one is going to be met by the contents of Book . . . a mere matter of 52 pages—or it is not going to be met at all.

Let us now diverge a bit. "The main purpose of this book is to tell . . . what medicine has learned about stress." It should be noted in passing that there is a glossary at book's end to help out on the technical terms. The main subject of the book is the G.A.S. (general adaptation syndrome) which came to be called the stress syndrome; and conversely, the stress syndrome, I suppose, may be said to be a G.A.S. First, one should mention that a syndrome is merely a collection or constellation of related signs and symptoms which is characteristic of a disease or condition of malfunctioning. The G.A.S. is the sum-total of all non-specific changes that occur in the body during the time it is being acted upon by a stress-producing agent (stressor). These non-specific changes occur in three stages, 1) alarm, 2) resistance, and 3) exhaustion. Number 3 eventually, if it continues, in death. Most stresses are only severe enough to produce stages 1 and 2. Going through 1 and 2 repeatedly in one's lifetime constitutes "adapting" to things. Various degrees of failure to adapt, Selye says, result in various disease or degenerative conditions.

## Aerobics

On the horizon the tiny figure of Johnny Hero running, on and on under a running star, atop of his surging mountain, and, in the running, Johnny running, training for the big match next week; the credit roll by. That's Japanese television cartoons, every night. I was in the room. Our TV tends to show a guy in *char* doing something. Or on a table under muzzled doctors who are having an argument about surgical technique.

—SB

It turns out that the index of physical fitness is not strength, stamina, or quickness (though it is mainly follow if you're fit) but rather, the body's ability to use oxygen. I am an ardent athlete and sports freak of all kinds and spent nine years as a competitive swimmer, so I feel I can judge in these things. I also participated in the testing which resulted in the book (let Lackland AFB, Texas) while in the Air Force, so what is said is so. This book can save a lot of time and energy to put you in shape with about an hour's work a week. No kidding. I do about 3-4 times that but you have to do the basic or you're shortchanging yourself, your future existence, and your loved ones.

(Suggested and reviewed by Kenneth Sawyers)

The New Aerobics  
Kenneth S. Cooper, M.D.  
1970, 191 pp.

\$1.25 postpaid

from:  
Bantam Books, Inc.  
686 Fifth Ave.  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

The main objective of an aerobic exercise program is to increase the maximum amount of oxygen that the body can process within a given time. This is called your aerobic capacity. It is dependent upon an ability to 1) rapidly breathe large amounts of *o<sub>2</sub>*; 2) forcefully deliver large volumes of blood and 3) effectively deliver oxygen to all parts of the body. In short, it depends upon efficient lungs, a powerful heart, and a good vascular system. Because it reflects the conditions of these vital organs, the aerobic capacity is the best index of overall physical fitness.

22 Health  
Community

Now to get back to the question of criterion number one—the use of the book as a tool. Up to page 25B it is not useful as a tool to the general reader. Selye says, "All we have said up to now helps to guide treatment on the part of a physician," and ". . . even dietary treatment must be controlled by a competent physician. All this book can do in this respect is to help the patient understand why his physician prescribes a certain regimen; it could not presume to be an adequate preparation for self-treatment along such purely medical lines." BUT, ". . . there are many things I have learned from the study of stress, which the physician cannot use but the patient can. I particularly want to share these lessons with you. . . . OK, reader, you are now on your own, and you will indeed find out that criterion number one is met.

(Reviewed by R. D. Chamberlain, M.D.)

The Stress of Life  
Hans Selye, M.D.  
\$2.75, 324 pp.

\$2.75 postpaid

from:  
McGraw-Hill Book Co.  
Princeton Road  
Hightstown, N.J. 08520  
Manchester Road  
Manchester, Mo. 63062  
8171 Redwood Highway  
Novato, CA 94947

or WHOLE EARTH CATALOG

Stress is essentially the rate of all the wear and tear caused by life. It will take a whole book to explain the complex mechanisms through which the body can reduce this type of wear and tear. But let me say here, by way of an introduction, that although we cannot avoid stress as long as we live, we can learn a great deal about how to keep its damaging side-effects to a minimum. For instance, we are just beginning to see that many common diseases are largely due to errors in our adaptive response to stress, rather than to direct damage by germs, poisons, or other external agents. In this sense many nervous and emotional disturbances, high blood pressure, gastric and duodenal ulcers, certain types of rheumatic, allergic, cardiovascular, and renal diseases appear to be essentially diseases of adaptation.

The important difference between the discovery of America by the Indians, by the Norsemen, and by Columbus was that the Norsemen succeeded in attaching the American continent to the rest of the world.

It is not to see something first, but to establish solid connections between the previously known and the hitherto unknown that constitutes the essence of scientific discovery.

Paracelsus (whose true, but somewhat bombastic, name was Theophrastus Bombastus von Hohenheim) was a famous Swiss physician who lived during the sixteenth century. In his treatise on "Diseases Which Derive Man of his Reason," he stated that "the best cure and one which rarely fails is to throw such persons into cold water."

Disease is not mere surrender to disease, but also fight for health; and unless there is fight there is no disease.

## The Israel Army Physical Fitness Book

Everybody I know's doing pushups. Kesey claims there's another wave of creativity coming, and he's doing pushups to get ready. Lloyd just finished editing his home book, and he's doing pushups to get his head and body back in phase. I'm doing pushups out of some grotesque nostalgia for the Army (U.S.). Low rent yoga, that's what it is. Sure enough, on a few square feet of prison cell or meditation hut, it can make you feel dedicated and well. —SB

(Suggested by Whole Earth Access Company)

The Israel Army Physical Fitness Book  
Josef Luz Lurie and Samuel Segov, Ed.  
1969; 127 pp.

\$1.00 postpaid

from:  
Grosset & Dunlap, Inc.  
51 Madison Avenue  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

## THE AEROBICS CHART PACK RUNNING EXERCISE PROGRAM (under 30 yrs old men)

WEEK	DISTANCE (miles)	TIME (min)	PROM/WK	POINTS/WK
1.0	2.0	13:30	15	15
2.0	2.0	13:00	15	15
3.0	2.0	12:45	15	10
4.0	2.0	12:15	15	15
5.0	1.0	10:30	15	15
6.0	1.0	10:30	15	15

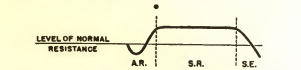
After completing the above starter program, continue with the Category 1 conditioning program below or, if you wish to speed up your program, follow the 12-minute test of fitness. If you take the test, find your category from the table at the beginning of the chart pack (under 30 yrs old category 1, II, or III), continue with the appropriate category below. If your category is IV or V, follow the instructions in the note at the bottom of page 56. Start the program by walking, then walk and run, or run, as necessary to meet the changing time goal.

What is disease—not any one disease, just disease in general? This question lingered on in my mind, as it undoubtedly has in the minds of most physicians of all nations throughout history. But there was no hope of an early answer, for nature—the source of all knowledge—rarely replies to questions unless they are put to her in the form of an experiment to which she can say "yes" or "no." She is not loquacious; she merely nods in the affirmative or in the negative. "What is disease?" is not a question to which one can reply this way.

Occasionally, if we ask, "What would you do if . . . ?" or, "What is in such and such a place?" she will silently show you a picture. But the answer appears. You have to work things out yourself first, aided only by instinct and the feeble powers of the human brain, until you can ask precise questions, to which nature can answer in her precise but silent sign language of nod and pictures. Understanding grows out of a mosaic of such answers. It is up to the scientist to draw a blueprint of the questions he has to ask before the mosaic makes sense.

Fortunately, it is not so much the existence of things that we do not know, or about which we are too uncertain, that handicaps our research, but the existence of things we do know and about whose interpretation we are quite certain—although they may turn out to be false. Lack of equipment, or even lack of knowledge, is much less of a handicap in original research than an overabundance of useless materials or useless (and sometimes false) information which clutters up our laboratories and our brains.

The term *adaptation energy* has been coined for that which is consumed during continued adaptive work, to indicate that it is something different from the caloric energy we receive from food, but is not of the same name, and we still have no precise concept of this energy might be. Further research along these lines would seem to hold great promise, since here we appear to touch upon the fundamentals of aging.



In the acute phase of the alarm reaction (A.R.), general resistance, to the particular stressor with which the G.A.S. had been elicited, falls away below normal. Then, as adaptation is acquired, in the stage of resistance (S.R.), the capacity to resist rises considerably above normal. But eventually, in the stage of exhaustion (S.E.), resistance drops below normal again.

Adaptability can be well trained to serve a special purpose, but eventually it runs out; its amount is finite.

The fact is that a man can be intoxicated with his own stress hormones. I venture to say that this sort of drunkenness has caused much more harm to society than the other kind. . . . It is not easy to tune down when you have reached your stress-quota. Many more people are the helpless slaves of their own stressful activities than of alcohol. Besides, simple rest is no cure. Activity and rest must be judiciously balanced, and every person has his own characteristic requirements for rest and activity. To lie motionless in bed all day is no relaxation for an active man.

**Starting Position:** Stand with feet apart, trunk bent forward, arms raised sideways.

**Movements:** 1) Bend your back and drop your head while crossing your arms downwards.  
2) Back to starting position, bringing arms up sideways.

3-4) Rest in starting position.  
**Explanation:** In the starting position, arms should be at the sides and pulled forward, in line with the head. Eyes front. When arms are crossed downwards they should be fairly loose. Be careful to keep knees straight.

[Army Field Manual FM 21-20, Physical Readiness Training, is a lot more comprehensive. Order from the Government Printing Office.]

## Emergency Medical Guide

No book can substitute for a physician's care. Self-treatment of disease can be worse than no treatment at all. But the proper use of a home health manual may be invaluable in recognizing serious diseases and emergencies, rendering first aid, and treating common medical problems which do not require a physician's assistance. Outdoorsmen and members of isolated farms and communities, especially, should have on hand as much medical information as possible.

Henderson's Emergency Medical Guide is a useful book, including illustrated sections on bandaging techniques, mouth to mouth resuscitation, injuries to extremities, poisoning, snake bites, emergencies of infancy and childhood, and home care of the ill. Emphasis is placed on the prevention of accidents and disease. Some situations are covered which are not generally considered emergencies (except by the patient) such as painful menstruation. A chapter on normal human anatomy and physiology is included in order to make the rest of the book more intelligible to those giving first aid.

[Suggested and Reviewed by Eugene Schoenfeld]



Fig. 4-3. Heimlich maneuver for reducing a simple dislocation of a finger, applying pressure on each side of the affected joint.

Thou shalt not attempt to set a dislocation of a thumb. Because of its complicated anatomy, reduction may require a minor operation. Cover the thumb with a protective compress, support the hand in a sling, and seek medical aid.

## Home Medical Handbook

Quick and ready for all those down-home medical problems. Pretty good book.

—SB

The Home Medical Handbook  
E. Russell Kodet, Bradford Angier  
\$9.95, 224 pp.

\$4.95 postpaid

from:  
Association Press  
591 Broadway  
New York, N.Y. 10007

WHOLE EARTH CATALOG

## Artificial Respiration

If the victim is not breathing, act rapidly and decisively!

1. Have an assistant summon help by calling the fire department first, then a doctor. Or ask the fire department to summon a doctor.
2. Do not waste time with a drowning victim in trying to hold him upside down to empty lungs, etc. A small child, however, can be held by the feet, head down, for four to seven seconds, no more, to drain lung secretions.
3. With an adult, place flat on back, with feet slightly higher than head. But do not fuss. The positioning should not take longer than a few seconds. Hold up the chin by supporting it with the hand, pinch the nose together, and put your mouth over the victim's mouth and blow.

Blow hard enough to make the chest rise. If the chest does not rise, it means that the chin is not being supported upward enough to clear the airway in back of the throat. The blowing should be as hard as blowing a whistle, but not so hard as blowing up a balloon. Blow twelve to fifteen times per minute.

4. With a small child, if it may be possible to pinch the nostrils together while blowing. With a small child, then, blow over both the nose and mouth. Blow just hard enough to make the chest rise and fall. Blow fifteen times a minute.

DO NOT GIVE UP! AT TIMES IT MAY BE NECESSARY TO DO THIS FOR SEVERAL HOURS PROVIDING THERE IS STILL A HEARTBEAT.

Closed Chest Cardiac Massage

## 1. RECOGNITION.

If there is a cardiac arrest—that is, heart stoppage—from drowning, a blow on the chest, electrocution, shock, insect bites, or other cause, there will be:

- a. No pulse.
- b. Dilated pupils.
- c. Shallow or no respirations, usually the latter.

## 2. TREATMENT:

This requires two people. Place the victim on his back on something firm. Give mouth-to-mouth resuscitation, as already described. Someone else should summon the fire department or a resuscitation squad if one is available, then a doctor.

In the meantime, put the heel of one hand on the lower one-third of the sternum (breastbone). Place the second hand on the first. Depress the chest. The sternum should move about one or one and one-quarter inches.

Evert your body weight straight downward, not toward the upper chest or abdomen. Do this forty to sixty times per minute, while someone continues to use the mouth-to-mouth resuscitation.

Periodically check the eyes. If circulation is adequate, the pupils will start to get smaller. Also check the pulse for a palpable beat, about the response to see if they have started.

When the pulse and respirations are working, continue to watch the patient closely for twenty-four hours; at least, or until the patient is under a doctor's care. The heart may stop again, whereupon the procedure will have to be repeated as often as necessary.

## Emergency Medical Guide

John Henderson, M.D. F.A.S.

1963, 1969; 556pp.

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8171 Redwood Highway  
Novato, California 94947  
or WHOLE EARTH CATALOG

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## The Merck Manual

In 1850 type-packed pages this book covers most of the possible illness and injuries that can occur to human beings. Each difficulty is described, symptoms are discussed and suggested treatments are indicated.

The writing is extremely technical and is designed as a ready reference for practicing nurses and physicians. Unless you are at ease with the unusually colorful language of medical medicine you will need a medical dictionary to fully understand this book.

While a considerable portion of the advice given is sensible and does not require a doctor's presence, much of the book will not be of use to persons who do not have access to medical supplies. This book is not intended in any sense for primitive or simple living conditions; it does not describe alternatives if medical treatment is not available nor does it suggest folk treatments in lieu of hospitalization. However, if you want to understand what is going on when a member of your family or community is seriously ill, this volume can be helpful. There is an excellent index as well as a special section devoted to specific prescriptions and special therapies. The excerpts given below illustrate both the common-sense and the technical aspects of this volume.

[Reviewed by James Fadiman]

[In]novator reports that many prescription drugs can be obtained without a prescription and at low cost from veterinary supply houses. —SB

### DYSPEPSIA ("indigestion")

**Treatment**  
General: The patient should eat a balanced diet (see DIETS, Normal Diet). At least 1½ hr meal should be allowed. Food should be chewed thoroughly without haste and not constantly "swilled down" with liquids. When possible meals should be taken in a pleasant, quiet, relaxing environment. Smoking immediately before meals should be prohibited. Food should be properly cooked, appetizing and eaten in moderate amounts. Following a meal, the patient should avoid excitement.

**HEAT HYPERPYREXIA** (sunstroke, heatstroke, thermic fever, *sirosis*)  
Etiology: prolonged exposure to excessively high temperature or the direct rays of the hot sun, combined with exercise and lack of air circulation are the responsible factors.

**Symptoms and Signs:** Onset may be sudden or may follow complaints of weakness, headache, vertigo, anorexia, nausea and precordial distress. The temperature rises rapidly to 105 or 106 F. or higher. Convulsions and projectile vomiting may develop and are of serious import. . . . Treatment: heroic measures are indicated and must be instituted immediately. If the rectal temperature is 106 F. or over, an ice water tub bath or a blanket soaked in water is indicated, and the skin should be rubbed vigorously until the temperature falls. . . .

### DISTURBANCES IN

#### ELECTROLYTE (Mineral)

**METABOLISM**  
Disturbances in metabolism will occur when excessive water is given to a patient in whom antidiuretic hormone activity (postoperative, or in bronchogenic carcinoma, head injuries, or porphyria) or a low glomerular filtration rate is present. Movement of the water from cells in E.C.F. with a high glucose concentration may produce a temporary hyponatremia.

The Merck Manual  
11th Edition 1966; 1850 pp.

\$7.50

Merck tries not to make this book available to laymen. We can't carry it any more. You can get it at most college bookstores.

—SB

## Handbook of the Hospital Corps United States Navy

Well, we've lost the letter from Tom Scott talking about this last word in medical information, how to run a hospital (how to embal, how to shake down a thermometer, medical chemistry, anesthetics. . .) Take it with your gang to Mars. Bargain price.

—SB

[Suggested by Tom Scott]

## Handbook of the Hospital Corps U.S. Navy

Innumerable pages in enormous folder

\$15 postpaid

from:  
U.S. Government Printing Office  
Division of Public Documents  
Washington, D.C. 20402

214 First Aid  
Community

## First Aid

The fourth edition, the 37th printing, of the standard text of how to help. Time for a new edition.

—SB

### First Aid

American National Red Cross  
1933, 1937, 1945, 1957; 249 pp

\$1.00 postpaid

from:  
Doubleday & Company, Inc.  
277 Park Ave.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

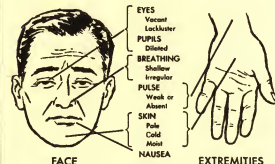


Fig. 9 Signs of shock.



Fig. 54 Hammock carry—showing interlocking grip.

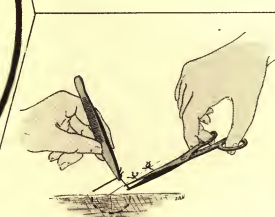


Figure 13.—Removing Sutures. Apply traction on one end and cut through below portion exposed on surface. Pull uncontaminated thread through tissues.



Figure 1.—"Flash Burns" of Third Degree. Partial protection of lower extremities by cloth trousers, and complete protection of abdomen by multiple layers of a cummerbund. Burns of the back where there was no clothing are sharply outlined. Photo courtesy Armed Forces Institute of Pathology.

The photo is from Hiroshima.

—SB

## Emergency Medical Books

Re-references to baby and birth outside of hospital. This is a tricky subject. . . however in isolated areas it could happen and not by choice. I have a Red Cross Instructor's card, but we don't teach child birth in our courses. However I was President of our local ambulance company (two Cadillac ambulances for a town of 1,500 population. . . not bad eh?) for a year or so; and also have the N.Y. State training certificate for ambulance attendant. Issued by State Health Dept. after lengthy instruction and exam. etc. Required by all ambulance attendants, drivers, etc. who work for pay but NOT required for volunteer "Free" service such as ours. And have been teaching first aid for perhaps 40 years or more in army, scouting, etc. So have collected a lot of material on the subject. Strongly recommend following for people outside range of quick medical help (2 or 3 days from doctor, etc.) This is NOT first aid. . . but "medicine".

"Emergency Victim Care & Rescue" by Div. Vocational Education, State Dept. Education, Columbus, Ohio. . . contains excellent chapter on childbirth. Costs 3 or \$4 as I remember. A big volume of 327 pages. . . lots of good dope on rescue, knots, etc.

"Emergency Care of Sick & Injured" . . . Manual for Law Officers, Fire Fighters, Ambulance and Rescue Sigs and Nurses" by Committee on Trauma American College Surgeons, edited Robt. Kennedy, M.D. Pub. by W. B. Saunders Co., Philadelphia, Penna. A tiny book of only 122 pages and expensive at \$2. but very up to date and excellent chapter on childbirth.

"Ships Medicine Chest and First Aid at Sea" by U.S. Dept. Health, Ed. & Welfare, Public Health Service. Obtain from Supt. Documents, Govt. Print. Office, Washington, D.C. Big cloth bound volume of 428 pages, many color illustrations, including some color plates on VD symptoms, etc. Price \$3.50 and a real BARGAIN, written for captains of vessels without a doctor aboard. Good chapter on birth of baby, also covers contagious diseases very well, symptoms and treatment. A life saver for those out of reach of doctor in isolated areas.

"Being Your Own Wilderness Doctor" Dr. Kodet & Bradford Angier. Stackpole Books, Cameron & Kalkreuth, Harrisburg, Pa. 17105 \$3.95 clothbound book of 127 pages. Very simply written, good on modern antibiotics, but you must get prescriptions for many of these drugs. . . excellent on kits for travel in wilderness areas. (See p. 273.)

I could mention many more books, but these are excellent. I assume anyone interested has the American Red Cross First Aid Handbook which should be the starting point of your study. Try and needle your library into stocking some or all of these books or chip in with your group to lower cost. It is more important to study in advance than when a patient is bleeding or seriously injured. Your local Red Cross chapter can arrange to give you their first aid courses. The life you save may be your own or that of a loved one!

Mal. Lyman F. Barry  
Nunda, N.Y.

## The Body Politic

An attempt to reduce America's overdose of AMA. Dr. Brilliant plans to carry street and home medical information.

—SB

### The Body Politic

Larry Brilliant, ed.

\$7 yr

from:  
The Body Politic  
Medical Committee for Human Rights  
1360 Howard St.  
San Francisco, CA



## Dear Dr. Hippocrates

Long-hairs are often new staff with their bodies and nervous systems that occasionally needs medical attention or perspective. Communication was blocked, however, by the social understanding that they aren't supposed to be doing that stuff. Dr. Schoenfeld and his medical advice column in the underground press cut through the blockage, and here came a spot of information as weird as it was useful. Good answers made the question go.

—SB

Dear Doctor Hippocrates  
Eugene Schoenfeld, M.D.  
1968: 112pp.

\$9.95 postpaid

from:  
Grove Press, Inc.  
214 Mercer St.  
New York, N.Y. 10012-1013

or WHOLE EARTH CATALOG



For cosmetic reasons and sex appeal, I have been interested for some time in removing my pubic hair. I initially tried various self-cutting methods, a safety razor leaves red marks and bumps which are both unsightly and painful. An electric razor is better but still unsatisfactory. I called an electrologist who removed hair, but the found my request most peculiar and refused to undertake the work.

Can you suggest a solution to the problem? Is there any reason to believe removal of pubic hair would be either unhealthful or dangerous?

Most Middle Eastern women routinely shave their pubic hair but I leave to you and your chief friends the question of whether this practice will enhance your sex appeal. It does not seem medically dangerous.

Cautious use of a depilatory or one of the newer electric razors would seem the best solution to your problem. I would advise against permanent removal since you might someday move to a colder climate.

Note: Judging from the volume of mail received in response to the preceding question and answer, shaving pubic hair is definitely not confined to the Middle East. Excerpts from three letters follow:

A leading manufacturer of safety razors (Gillette) recently placed the mark something called a "Scandy Girl." The ad dealt with the problem of very brief lasting nits but the letter from the girl who shaves made me wonder. Perhaps she needs instructions in the use of lather or brushless cream.

She will have far better results if she uses an electric hair clipper such as the Oster barbers use. The Oster blade is the finest one and will not leave unsightly stubble, irritate the skin or cause abrasion.

For shaving, use alcohol-it eliminates abrasions and little bumps. This was told me by a psychiatrist.

I have seen countless old films in which Oriental bartenders slip their unsuspecting customer a "Mickey Finn" which invariably flakes them out of their skulls in about thirty seconds. Is there any such drug that, taken orally, would put a person out in less than a minute?

Two types of "Mickey Finn" were allegedly used. One was chloral hydrate, a sleeping preparation, which induces sleep after twenty or thirty minutes. Like barbiturates, it is especially powerful when given with alcohol.

Another "Mickey Finn" favored by bartenders was a strong laxative, a favorite method for getting rid of undesired customers. But only in Hollywood do "Mickey" work within a minute.

Could you please tell me if it is possible to become pregnant without coitus if ejaculation occurred outside the vagina?

Pregnancy without coitus is possible if semen is at or near the entrance to vagina. This may occur even if a girl is wearing underpants, according to some now well-informed female sources.

Perhaps this helps to explain the phenomenon of virgin births. But it still seems a poor way to become pregnant.

Are there any ways to get birth-control pills besides having to go to a doctor to get the prescription?

No and for good reason. The doctor will take a medical history and do a gynecologic examination, including a Pap or cancer smear, to determine that there are no conditions pills or cancer could be caused or made worse by taking birth-control pills. You should see your own physician or you may be able to see a nurse at your local health department or Planned Parenthood office. Doctor's aren't so bad. Some of my best friends . . .

[The following letter was sent air mail special delivery from New Orleans.]

Dear Dr. Schoenfeld:  
Is it true that smoking income can make you high? (I am mainly referring to the Jose income stick from India.)

Love,  
Paul —

Dear Paul:  
I have not been aware that smoking income could make one high. This effect would have been discovered thousands of years ago if it were true.

Are you sure it's income you're smoking?

Sincerely,  
Eugene Schoenfeld, M.D.

## Complete Home Medical Encyclopedia

Just about everything that could happen to your body is discussed in this fat paperback. Acne, active, osteoarthritis, antrax and arthritis to sexual intercourse, thrombocytosis, obliterans, and worms. Dr. Hyman combines specific treatments with clear explanations of bodily functions and how they get interrupted. I learned more here about acne than I have from any of the dermatologists I've seen. There are occasional diagrams in the alphabetically arranged text, which is written with the sensibility and humor you'd want from your family doctor. The traditional general practitioner is said to be growing scarce in the American scene, but many of the questions you might want to ask him are answered here.

—Hal Hershey

### The Complete Home Medical Encyclopedia

Harold T. Hyman, M.D.  
1963, 1966, 632 pp.  
\$1.65 postpaid

from:  
Avon Books  
959 8th Ave.  
New York, N.Y. 10019

or WHOLE EARTH CATALOG



The control of acne requires a joint effort of the part of youngster and parent, usually the mother.

After a review of the nature of the disturbance, as outlined above, the parent will do well to reassure the child that no blame or shame is attached to the condition.

The child should be told that acne is not due to uncleanliness or bad habits of any description; that it is not a disease but more in the nature of a normal feature in the process of growing up. Here is a suggested outline for the home-treatment plan.

Each morning apply a lather of pure soap or a sudsing detergent (Dove) to face, shoulders and chest. Scrub vigorously with a rough towel. Give special attention to skin folds and creases.

Each afternoon or early evening, on return from school or work, repeat the scrubbing. Then, expose affected areas to ultraviolet rays, using direct sunlight, an inexpensive sun lamp (Sperry) or a bulb (IRS model) which has the recommendation of the American Medical Association or a testing magazine. Repulse the distance from the source and the time of exposure so that the skin is tanned but not burned, so that it flakes but does not peel.

At bedtime, apply hot towels to affected skin areas until flushed. Then, with scrubbed hands and blunt fingernails, gently but firmly extract secretions from whiteheads and blackheads and from pores in skin folds, especially those on the nostrils and between nose and cheek.

Twice weekly, shampoo with hard soap or sudsing detergent (Drene). Scrub scalp vigorously with a tough hand brush before drying.

Apply application of medicated or cosmetic ointments and creams that may tend to plug the channels you're trying to keep open.



Fig. 14 Jackknife position for relief of acute back pain.

## Crabs

I don't know if you've read this one before, but for your edification, here is a quote from the sheet of A-200 Pyriate Liquid.

### Advantages of A-200 Pyriate

1. A-200 Pyriate is a liquid... no messy salve.
2. It kills on contact: crab, head and body lice and their eggs (nits), also chiggers (red bugs), and dog fleas.
3. Leaves no tell-tale odor.
4. Does not permanently stain clothing. Is easily removed with water... without soap.
5. Destroys eggs or nits, as well as parasites themselves.
6. Its advantages over blue ointment and kerosene lotion are obvious.
7. It cost \$1.15 a very expensive drug store.

IT WORKS! As anyone who has sat up half the night every night coughed over a dying flashlight pursuing the pernicious phthirus pubis knows, that's the only comment that counts.

Jim Huston  
Cleveland, Ohio

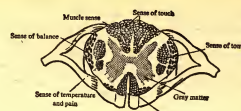


Fig. 26 Spinal cord (cross section)

## Treatment of Acute Alcoholism

The best treatment of acute alcoholism is prevention. Not by absolute prohibition, but by judicious indulgence in the pleasures and use of alcoholic beverages. Here are some hints to the accomplishment of this end:

Never take more than the equivalent of two ounces of hard liquor or two bottles of beer at any one session. This will assure you of a safe level of blood alcohol (up to 0.05%).

If you exceed the safe limit, don't drive your car.

If your excess exceeds the safe limit, take away car keys.

If neither you nor any other member of your party is in condition to drive the car, get some other person to drive for you. (See ACCIDENTS.)

Adopt a protective attitude toward the person who, on occasion, takes a few too many. If docile and amiable, get him (or her) to bed to sleep it off. If possible, resist efforts of well-meaning amateurs who strive to sober the patient up with large quantities of coffee and/or a cold shower.

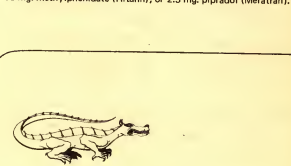
If you are unable to control an alcoholic, send for a physician who may succeed by giving a large dose of paraldehyde or an injection of apomorphine (vomiting within ten minutes) or a tranquilizer (Librium, Thorazine, etc.).

On awakening after a binge, take warmed fluids (tea; consommé; hot water; citrus fruit juice; clam broth, etc.). Do not add to dehydration by resorting to the conventional saline purge — with or without precedent caliche.

For relief of the hangover headache, don't take the "hair of the dog that bit." Instead, take a dose of aspirin and wash with the 250 cc. heated, charged water. As soon as stomach is tolerant, eat small quantities of warmed soft foods at frequent intervals.

Choose bland dry toast; warm milk; warm milk and soda crackers; puree of soup; mashed potato, etc. Despite craving for cold, carbonated fluids, avoid them, since they are very apt to cause abdominal cramps and intestinal distress.

For relief of the "morning-after-the-night-before depression," take a euphoriant such as 5 mg. dextro-amphetamine (Dexedrine), 5 mg. amphetamine (Benzedrine), 25 mg. phenmetrazine (Prelude), 10 mg. methylphenidate (Ritalin), or 25 mg. pipradol (Mertran).



THE LORD WORKS IN MYSTERYWAYS

D.R. got up and had breakfast with the family and then lay down on the couch to read the paper while Marcelle and Doyle got the kids ready to go to Sunday School. It had been clear the evening before that D.R. wasn't going to feel like going to church with them and so they left him alone, he was twice as bad off as they got dressed and ready. When the family left, the house fell into such profound silence D.R. dozed off almost immediately. But then around eleven the phone rang and woke him up and when it turned out to be God Himself calling to summons D.R. to Kentucky, alertness spread through him like a rush.

God was calling in the guise of Mrs. Godsey, Unis' Emmitt's neighbor down in Finley County, but Divine Right had no doubt who it really was. Her high, nasal voice was certainly a strange one for such a weighty summons, but the Call was clear and unmistakable: Emmitt was dying at the homestead and he must go to be with him.

Mrs. Godsey told D.R. she hated to worry him, that it might be a false alarm, but she didn't think so. She said the Lord worked in mysterious ways, that it wasn't given people to understand everything He does, that Emmitt might perk up tomorrow and outlive them all, but according to her son Leonard who had been to see Emmitt twice the day before, he was twice as bad off as he had been and that she just had to call Marcelle and try to do something about getting somebody to go up and stay with him, or else get an ambulance to haul him down to that holler to the hospital. D.R. told Mrs. Godsey he couldn't get there before late that night, but that he would come on if she thought that was right; to be done. Mrs. Godsey said what honey? Some fell's eavesdropping and out our way and he said D.R. would what he said and Mrs. Godsey said she thought it would be wonderful if he would come, that it would certainly be a Christian act and a world blessing for Emmitt. Then she said D.R. that she said he was twenty-one. Mrs. Godsey said my, my, time flies and she said she knew his parents, God bless 'em, and she said D.R. had been proud he had turned out to be such a fine young man, and that she was looking forward to seeing him again. Then she said well honey, this is costing money, D.R. is older he is more used to go tell Emmitt he was on his way, that he would be there late that night or tomorrow at the very latest, and Mrs. Godsey said bless your heart child, and hung up.



## Handbook of Prescription Drugs

A drug ordered by brand name can cost several times as much as the same drug ordered by generic name. This book spells out the difference, its reasons, and how to get generic name prices. One way is, ask your doctor when he's prescribing a drug to prescribe the generic name.

—SB  
The New Handbook of Prescription Drugs  
Richard Burack, M.D.,  
1967, 1970, 368pp.

\$1.25 postpaid  
from:  
Baltimore Books Inc.  
101 First Avenue,  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



CELESTONE® 0.6 mg tablets \$13.56/100  
0.2% cream 1.00/g tube  
2.22/15 g tube

Betamethasone, N.F. is a steroid chemically and pharmacologically similar to dexamethasone (Decadron®). Like dexamethasone, it is immensely expensive, and in nearly every case it can be replaced by less costly prednisone, for oral administration, or hydrocortisone, for topical administration. See Prednisone, U.S.P., and Hydrocortisone Ointment, U.S.P., in the Price Lists.

Nonetheless, in 1967 Celestone® was among the top 200 prescribed drugs of all ages. In 1968 it ranked 143rd among prescriptions written for the elderly; 312,000 prescriptions cost these consumers \$1,626,000.

COCAINE SULFATE, N.F.

The manufacture and sale of this narcotic substance and also its price are rigidly dictated by the United States government: 450 grams cost approximately \$350. Therefore, a single 15 milligram tablet has wholesale value of approximately one cent. A representative price to druggists is \$11.80 per thousand 15 milligram tablets (Vitarin®). See Price List for Cocaine Sulfate, N.F.

The Handbook Lists Cocaine Sulfate, N.F., rather than Cocaine Phosphate, U.S.P., because the latter, being more soluble, is more bitter to the taste.

CO-HYDELTRA® 5 mg tablets \$3.25/100  
Prednisolone, U.S.P.  
Magnesium Trisilicate, U.S.P.  
Dried Aluminate Hydroxide Gel, U.S.P.

Prednisone is preferable, and can be less expensive. See Prednisone, U.S.P., in the Price Lists.

From a Medical Student

I did, however, register a note of dismay at the listing of *The Handbook of Prescription Drugs*, Pharmacology, in case you have not yet looked up. It may be defined as the study of the preparation, actions, and uses of drugs. Thus, although I am only a graduate student, I feel obliged to comment on this book. Strictly speaking, there is no such thing as a "generic equivalent." The term should be "chemical equivalent." Most drugs currently used are so potent that doses are less than half a gram. This means that the drug manufacturer is obliged to dilute drugs so that a dosage form may be of a convenient size. In addition, if the dosage form is a tablet (commonly, but incorrectly called a pill), it must meet what the dosage, various agencies must be added which will allow the formation of a compressed tablet. The consequence of these actions is that the chemical equivalent is often after the efficacy of the dose of the drug.

An excellent case in point is aspirin. Most aspirin tablets contain 5 or 300 mg of aspirin. However, the actual tablet weight is several times this. This is due to the addition of diluents, binders, stabilizers, and disintegrators. Aspirin (acetylsalicylic acid) is a very unstable compound, and in itself, even in its pure form, is a severe irritant of mucous tissue, such as is found in the stomach and intestines. It has been estimated that about a teaspoonful (5 ml. or 1/6 oz.) of blood is lost for each aspirin tablet ingested. However, its value is only for pure aspirin, and aspirin easily breaks down in the presence of moisture to acetic acid (vinegar) and salicylic acid (found in removing cream). By this time, it should be obvious that the care and skill with which a tablet or any medication is made and the extent of testing of the final product are directly related to the action of the product. Thus, when you open that bottle of cheap aspirin and smell the odor of vinegar, it is advisable only to dose your sevier system, unless, of course, you feel that you have a corn in your stomach that you would like to remove.

Another interesting case is one cited in the catalog, prednisone versus Miltexin. There are several cases reported in the medical literature where a patient received, not necessarily Miltexin, but a "brand name" prednisone while hospitalized, and then was discharged with a prescription written generically. I was fortunate that several prednisone tablets made by "generic" manufacturers were considerably less effective than the ones previously dispensed.

There are efforts being made by the AMA, American Pharmaceutical Association, and the Federal Government, as well as the manufacturers, to develop standards for drugs. However, these standards, when available, are basic minimums. There is no way at present of insuring anything but basic physical similarity between two "generically equivalent" preparations. Thus, two aspirin tablets may have the legal strength of disintegrating in 15 to 30 minutes in thirty minutes in a special apparatus, but one tablet may take 20 minutes, while the other takes ten seconds. I have seen this



## PRESCRIPTION DRUGS

If your drug isn't listed, DON'T WORRY—  
We fill any prescription!

Brand Name	Generic Name	Quant- ity	Our Prices	
			Usual	Generic
Alidactone.....	Spiroglactone & Hydrochlorothiazide.....	100	\$15.30	\$12.60
Amfetol.....	Methylephedrine.....	100	10.00	7.80
Anivert.....	Melitinol & Nicotinic Acid.....	100	7.35	5.85
Arilin.....	Nylidene.....	100	6.60	4.40
Atarax 25 mg.....	Hydroxyzine w/HCl 25 mg.....	100	11.65	9.95
Atromid-5.....	Clofibrate.....	100	7.75	8.70
Benadryl 50 mg.....	Diphenhydramine.....	100	3.70	3.00
Benamid.....	Probenecid.....	100	10.00	7.50
Benzalolin Alka.....	Phenylbutazone.....	100	7.75	7.35
Butisol 1/4 gr.....	Butabarbital.....	100	11.00	8.80
Butisol 1/2 gr.....	Butabarbital.....	100	2.60	1.95
Cardilate 10 mg.....	Erythritol Tetrastearate.....	100	3.45	2.75
		100	3.75	3.05

## Celo Direct Drug

Another thing you might like to list in a future edition is the Celo Direct Drug catalog. The Arthur Morgan School is closely associated with the co-op movement and has championed various consumer causes. For some years we operated Celo Laboratory Products, a project supplying Co-op pharmacists by mail at low cost. Then the Co-op started their own mail order drug service. At this point we turned our business over to them, but edited and published their catalog. I'll enclose a copy of it. It can be had free by addressing Celo Direct Drug Service, Burnsville, N.C. 28714.

Ernest Morgan  
Celo Press  
Burnsville, N.C.

## Vitamin E

about burns (July 1st catalog, pg 47), last November the gas stove in the place we were renting blew up and melted up my arm. In some places it was pretty bad (black and flaking away) by the time I got to the hospital and I hurt. I was given a shot (5 mg morphine) and the nurse touching the arm with phoskes and cool water. The dr. also told me to plan on skin grafting because the elbow was bad also. My old lady told me about vitamin E and I signed some under the bandage, took 3-4 grams a day with the same of vitamin C. IT WORKS. The only signs of the burns left show up on those occasional times when I drive me a through physical.

I forgot to say that the 3-4 grams was saved under the bandage. I think that the oral dosage also may be important getting the stuff into the system, there by getting to the burn several ways and making it available over a long time, but I don't know. I know a couple of women who squeezed Vitamin E from the capsule onto their stomachs during & after pregnancy to prevent stretch marks. They also exercised a lot & didn't get any stretch marks. We'd like to know more including natural sources for Vitamin E.

John McCarthy  
Denver, Colorado

happen, and I ask you which tablet you would think release its ingredient faster for more rapid absorption and consequently more rapid action? The ten second tablet was Bayer, the other was a readily available, but very cheap product whose manufacturer I shall not name.

I would like to conclude this tirade by stating that there are instances where a generic drug will be similar in action to a branded drug and that merely the fact that a drug is given a brand name does not insure efficacy. Thus, the use of generic medication by a doctor should be tempered by his experience and his knowledge of the drug. The doctor should be able to rely on the generic drug, in addition to the ability of the patient to receive the best possible medical care. Therefore, the blanket statement that a generic prescription will save you money, and generally true on a per dose basis, may not be true if it takes more of the cheaper medication to cure you.

As I see it, the solution to the problem at present from the patient's viewpoint is twofold. First, you must choose a doctor who is not an automaton and is thus capable of discussing with you the validity of a generic prescription in your specific instance. Secondly, you must choose a pharmacy which carries products from reliable lines, and not necessarily the cheapest staff that is available. This entails a most cases, first of all, the pharmacist is not a pharmacist, but a pharmacy is treated as a service, rather than a business. Unfortunately, there is very easy, thus, the problem boils down to caveat emptor. I would like to add, as a footnote, that most of us closely associated with drug avoid taking them as much as possible.

Sincerely,  
Craig K. Lewis  
Nashville, Tenn.

## Vitamin C and the Common Cold

Several people around here are in a vitamin C research program at Stanford; they're pretty healthy, maybe more so than last winter. Linus Pauling has made vitamin C very popular. Linus Pauling, what do you think of, um, marijuana?

—SB

Vitamin C and the Common Cold  
Linus Pauling  
1970; 122 pp.

\$1.95 postpaid  
from:  
W. H. Freeman & Company  
860 Market St.,  
San Francisco, Calif. 94104

or WHOLE EARTH CATALOG

Vitamin C  
and the  
Common  
Cold

Linus Pauling

First, for good health I recommend the regular ingestion of an adequate amount of ascorbic acid. I estimate that for many people 1 g to 2 g per day (1000 mg to 2000 mg per day) is approximately the optimum. Ascorbic acid is essential. There is evidence that some people remain in very good health, including freedom from the common cold, year after year through the ingestion of only 25 mg of ascorbic acid per day. The requirements of a few people for ascorbic acid may be expected to be even smaller. For some people optimum health may require larger amounts, up to 5 g per day or more.

## NRTA—AARP Pharmacy

Biggest and best source for mail order drugs. Offers both prescription and non-prescription items at a great discount. Especially good for vitamins if you buy the NRTA-AARP Formula that's equivalent to nationally advertised brands. Also a good selection of elastic stocking and hearing aid batteries.

They say their service is only for members of the National Retired Teacher's Association-American Association of Retired People. The scrupulous among us will join (they don't check) for an annual fee of \$2.00. Well worth it for a confirmed pill popper. You don't have to be old, after all, to be retired.

Interestingly enough, I've been lead to believe by an official of NRTA-AARP that, despite the really good discount given, the co-op pharmacy is a real money-maker for the organization; so don't feel like you're robbing a bunch of old people by taking advantage of this. Other good things: they will give you credit with no delay for credit clearance and there are no postal charges.

(Suggested and reviewed by James Thorsen)

Catalog

free

from:  
NRTA—AARP Pharmacy  
1224 24th Street, N.W.,  
Washington, D.C. 20037

## VITAMIN E

50 I.U.	100 I.U.	200 I.U.
100s. \$ 1.98	100s. \$ 3.25	100s. \$ 4.95
300s. 5.35	300s. 8.78	300s. 13.35
1000s. 14.00	1000s. 24.00	

## NIACIN

(Nicotinic Acid)

NIACIN	100s	300s	1000s
50 mg.	\$ .39	\$ 1.05	\$ 3.00
100 mg.	.69	1.86	5.50

## NIACINAMIDE

(Nicotinamide)

50 mg.	100 mg.
100s. \$ .39	100s. \$ .69
300s. 1.05	300s. 1.86
1000s. 3.00	1000s. 5.50
Wheat Germ Oil Capsules	100s. \$ .69
3 min.	300s. 1.86
	1000s. 5.50

Pyridoxine, 10 mg. 100s. \$1.00  
Pyridoxine, 25 mg. 100s. 1.50  
Pyridoxine, 50 mg. 100s. 2.25

A & D Concentrate Tablets 100s. \$ .90  
A & D Concentrate Tablets 300s. 2.43  
A & D Concentrate Tablets 1000s. 7.00

Riboflavin, 5 mg. 100s. \$ .80  
Riboflavin, 10 mg. 100s. 1.25

## American Indian Medicine

The definitive book—all the tribes, all the medicines. The author is looking through the window of Western medicine and Western anthropology, but he is looking with detailed appreciation. Weedmunchers could find no better guide. The people who could use it best probably can't afford a doctor and druggists and probably can't afford this book—another good reason for libraries.

—SB

### American Indian Medicine

Virgil J. Vogel  
1970, 983 pp.

\$12.50 postpaid

From: University of Oklahoma Press  
1005 Asp. Avenue  
Norman, Oklahoma 73069

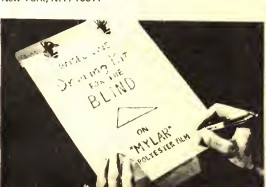
or WHOLE EARTH CATALOG

## Blind Aids and Appliances

From a design standpoint, as well as a humanitarian one, this is one of the most fascinating catalogs I've seen. Pretty reasonable prices. Braille edition of the catalog is available.

—SB

American Foundation for the Blind, Inc.  
15 West 16th St.  
New York, N.Y. 10011



Raised Line Drawing Kit. A method whereby blind people may draw or write and feel the lines on the top surface as the lines are made. The kit contains a rubber covered drawing board with hold-down clips for 8½" x 11" material, a ball-point pen filled with a colorless lubricant, and a package of polyester film sheets which serve as the "paper."

Heretofore, it has been necessary to turn the page over to feel the lines made with tracing wheels and the like, but with this new development, the lines can be felt on the top side of the page. The lines so made are quite easily followed by sight. (See Mathematical Aids section for description of Graph Marking Slate and Draftsman's Compass for use with kit.)

WS194—\$7.10

Polyester Film Sheets. Package of approx. 70 sheets.  
WC195—\$2.85

Ball Point Pen for WS194. (Inkless) WC196—55¢

Braille Music. Braille music may be purchased from:

American Printing House for the Blind  
1839 Frankfort Ave., Louisville, Kentucky 40206 or Howe Press, Perkins School for the Blind, Watertown, Mass. 02172.



Electronic Level — AFB Model. Standard Stanley level equipped additionally with mercury bubbles to provide an audible signal. Accuracy equivalent to sight bubble. When no signal is heard, accurate horizontal or vertical measurement has been obtained. Seasoned cherry wood, 24" length. Supplied complete with 3-volt battery. (Easily obtainable replacement batteries must be bought from local supplier.)

Two types:

Horizontal measurements only. TM325—\$39.50

Horizontal and Vertical Measurements.  
TM326—\$50.30

Himes concluded that "American tribes had no effective methods of preventing conception, and that they relied mainly on abortion, infanticide, and abstention to control family size."

Events have since proved how wrong Himes was, for not only have oral contraceptives come into general use in advanced countries, but Indian herbs were finally subjected to laboratory tests, and the search for an effective oral means of controlling fertility, and some of them were found to be effective. Just as America was considered to be undiscovered before the white men found it, so the Indian drugs were unreal or of no account until the white men discovered them. This is one example among many of the ethnocentric attitude which has hurt the white men more than the Indian by delaying scientific inquiry into aboriginal herbal knowledge. The Cherokee drug may have been of no use, but what is striking here is the way it was rejected *a priori*, simply because white men knew of no oral contraceptive, and therefore, presumably, none existed. It is noteworthy that until recently it could not only be said that Indian recipes for controlling fertility had not been investigated, but that the very names of the drugs used were largely unknown.

## Dig Warts

I cured my WARTS with a SWISS ARMY KNIFE. A true testimonial by Maichyspe the Younger of San Francisco—Plagued with Plantar's Warts for over a year, and advised by medical professionals, regular medicine is GENERALLY HOPELESS, I cured my WARTS with a SWISS ARMY KNIFE and voodoo. Twice a week for twelve months I cursed the warts and made them feel unwell. During that time, I took my stainless steel SWISS ARMY KNIFE and dug at them relentlessly. They have now more or less DISAPPEARED leaving only going holes and volcano-like craters on my calluses. I recommend this cure for any person with a cool hand, a knowledge of voodoo and a SWISS ARMY KNIFE. A SWISS ARMY KNIFE may be purchased at your nearest SWISS ARMY KNIFE dealer.

POE  
San Francisco, CA

## Folk Medicine

Of all the books on folk medicine that've come through our hands, this is the only one I'd trust enough to use. Seems like every other malady, Dr. Jarvis either pours honey on it or in it.

—SB

Folk Medicine  
D. C. Jarvis, M.D.  
1868, 192 pp.  
\$7.95 postpaid

From:  
Fawcett World Library  
67 West 44th Street  
New York, N.Y. 10036

or WHOLE EARTH CATALOG

## Wheelchairs

What do you do — and you might answer this question in your next edition — with the poor people who cannot walk and who have just enough to buy a vehicle for 100 or 200? And who risk to be fitted into their wheelchairs like the victims of Prometheus, the figure of Greek mythology, who put his short legs in long beds and long ones in short beds, stretching the legs or cutting them off accordingly.

Well, there is a good book out for those 400,000 people or so, to speak only of USA. See the enclosed clipping.

Herman L. Kamenzet, M.D.  
State Veterans Hospital  
Rocky Hill, Connecticut

**THE WHEELCHAIR BOOK: Mobility for the Disabled by Herman L. Kamenzet, State of Connecticut Veterans Hosp., Rocky Hill.** All types of rolling chairs, stands, beds, and walkers along with the services of care are reviewed in this reference manual. Numerous illustrations with explicit legends develop an understanding of the hundreds of features of modern wheelchair design, size, type, construction and accessories. Contains valuable information for professionals as well as laymen. '69, 288 pp. (6¼ x 9¼), 81 il., 8 tables, \$14.75

Charles C. Thomas, Publisher  
Springfield, Illinois 62703

Mequite (*Prosopis juliflora* [Swartz] DC, and *Prosopis glandulosa* Torr.). *P. juliflora* was the mequite of the Aztecs (hence, mequite), who mixed their leaves with other substances for an eye lotion when the eyes were hot and painful from alkali-ness. Seventy years ago Bourke reported that this shrubby tree was used for the same purpose by the American Indians. And in the same year, the Indians of the American Southwest used it in a similar manner. The Mesquero Apaches ground the leaves to a powder, placed the substance in a thin cloth, added water, and squeezed the liquid on the eyes. The Pimas applied the sap to sore eyes. The Maricopas used the dried juice, ground fine, as a sore-eye remedy by applying the substance to the lids and later washing it off with warm water.

The skeletal remains of unquestionably precolonial date (he concludes) are, barring few exceptions, remarkably free from disease. Whole important scourges were wholly unknown. There were no pathologic microbe-caused no hydrophobia. There was no plague, cholera, typhus, smallpox or measles. Cancer was rare, and even fractures were infrequent. There were no leprosy [leprosy] . . . there is as yet not a single instance of leprosy [leprosy]. There were, apparently, no new [skin tumors]. There were no troubles with the feet, such as fallen arches. And, judging from later acquired knowledge, there was a much greater scarcity than in the white population of many diseases of the skin, of most mental disorders, and of other serious conditions.

The chief diseases to which the ancient Indians were subject, he added, were digestive disorders, particularly in children and older persons, pneumonia, arthritis, and localized maladies such as nutritional disorders.

Wild mint. This is the only indigenous species of *Mentha*. Dr. Clapp reported in 1852 that it was little used in medicine but would be a tolerable substitute for the European species when they could not be obtained.

The Chayennes ground the leaves and stems of this species and boiled them for a medicine to prevent vomiting. Wild mint was used by all the Missouri valley tribes as a carminative, being steeped in water and sweetened with sugar for a drink. Because of its aromatic flavor, it was also used as a beverage among the Menominees. It was combined with catnip and peppermint for a pneumonia remedy, being drunk as a tea and also used as a chest poultice. The Flambeau Ojibwa brewed a tea from the entire plant for use as a blood remedy. It was also used in the sweat bath, and the Pillagers made a tea of it to break fevers. The Potawatomis used the leaves or tops for fevers and as a stimulant for pleurisy. Whites have used the whole plant for its bitter, pungent, antispasmodic, antirheumatic, stimulant, and anodyne properties.

Wild mint (*Mentha arvensis*, var. *canadensis* L.) has not been official, but it contains a volatile oil from which pulegone and thymol (USP 1982-1950, NF 1950—) or carvacrol have been isolated.

The shock experienced by plunging into cold water after the sweat bath is parallel to hydrotherapy used in modern times. Therefore it was probably effective for ailments of a psychosomatic nature.

Barre, Vermont, being the largest granite-cutting center in the world, I decided to try granite grading again, which, as it comes from the dust-removing device, is fine, like flour. Granite dust contains 5 per cent of potassium, and has been found to contain sixteen minerals. When I applied it to the soil around my garden plants, a number of things happened.

Among my flowers, I have 125 plants of delphinium. Each year I had been having to combat a tiny mite which caused the leaves to curl up and turn black. These harmful mites were so small that I had to use a magnifying glass in order to see them crawling to the leaves. I used a spray but it did not do away with them. When I added the granite dust to the soil around the plants, these harmful mites deserted my garden and have not returned.

Following the general examination, and the special examination of his nose, I gave the boy a chew of honeycomb, to learn of its effect. I wrote out directions for treatment to be followed at home and prepared drugs he was to take. Before I had finished I heard about five minutes later that the mother had said, "My nose is gone! I can breathe through it!" I gave the medicine for home use. I wrote a spray but it did not do away with them. Then I examined the boy's nose again to see what the honeycomb accomplished.

The nose tissue had subsided, as they would have if I had used a shrinking agent in the nose. Instead of being pale, the mucous membrane was now light pink in color. One week later, at the next office visit, the boy's nose was still open and he was breathing with his mouth closed.



THE THIRD DEPARTURE

After God hung up D.R. at a few minutes listening to the dial tone. But then he put the receiver down and went about getting ready to go. There wasn't much to do, actually, except put his clothes on, and leave a note on the desk for Marcella. Someone had left four dollars and some change in an ashtray on the desk. He took it and added a P.S. to his note explaining that he had. He made himself a meal and then he got some apples and oranges in a sack and took them out to the bus. Urge was in the worst mess he had ever been in, but mechanically he was all set to go. Half an hour after that, he was back at the bus. Right backed out of his sister's drive way and set out down Clark Creek for Kentucky.

Country Cures & Medical Stuff  
Community



## Blessed Event at Cabin

THE FARM JOURNAL AND BABBS JUDGE  
Friday June 13, 1969 Weather: Cloudy with chance of clearing  
BLESSSED EVENT AT CABIN !!!  
NADINE AND PAGE PRODUCE !!!  
INTREPID REPORTER ON HAND



Daughter born to joyous couple sits up for pic.

## Scary Event Almost at Home

I love every one of you, but I must reluctantly beg to join those who plead for less do-it-yourself midwifery unless— and this is a HUGE unless— you have a hip doctor on instant, around-the-clock ambulance call, and a girl in attendance who has been through a practical-nursing course and can (AND WILL!) put her foot down if she sees any signs of trouble.

Take me, for instance. No one could have imagined I'd get into any trouble. I'd had two babies as easy as spitting. I thought I was a perfect risk for home delivery, but my nasty old spillout doctor talked me out of it. "Yeah," I thought, "She wants those high hospital fees."

Nevertheless, I went into the hospital. Grousing to the last minute about all that nasty red tape and inhibition of a woman's simplest functions. Who, me, have trouble? Way, I dropped babies as easy as a Chinese peasant woman. And so on, and so forth, far into the night. And farther into the night. And farther yet into it— hey, damn it, that baby should have been here a long time ago and I was beginning to feel rottenner than I (a prime natural-childbirth candidate with two births behind me) should EVER have felt.

Medications— I still felt worse. Anxys: no, not twins, just one black blob. Anesthesia— not enough to put me out but enough to stop the screaming (and baby, I'm NOT a coward, I didn't utter yell one when I had a dilated cervix reduced without anesthesia since I can't take demerol). To late for a C-section. More anesthesia. And far into the night, with my husband's face whiter than I ever saw it, the doctor dipping with sweat, and finally a "blue baby", eleven pounds, bruised and scratched and one shoulder fractured in spite of the best O.R. in Berkeley. Ten minutes of straight oxygen to bring her round, forty stitches or so and (I think) a pint or two of blood in me. (I lay there and counted the damn stitches while they put them in. You can feel them even if they don't really hurt.)

Just imagine doing that in your community?

Yeah. One woman screaming her head off for eight or nine hours. (At I say: I didn't even moan for No. 1 and No. 2). One dead— very dead— baby, probably, at the end of it, since only incredible skill rendered this one. Probably one very dead, blood-out woman, too. Six or eight nervous amateur midwives... all of whom would have two incontinent corpses on their hands, and be charged with being accessories before, during and after the fact of

- gross negligence
- practicing medicine without a license
- may even manslaughter.



## HOSANNA AND HURRAH FROM THE HIGHEST TO THE LOW ON A SUCCESSFUL BIRTH

At eleven minutes before eight this morning, Nadine gave birth to a fine healthy pink skinned daughter.

Page had stepped out of the cabin for a moment.

Contractions were steady and fierce, but with Nadine directing the energy, the baby moved swiftly down the birth canal, through the cervix, and appeared at the "door."

Babbe, on hand for the occasion, broke the membrane with his finger, allowing the juices to flow freely and the head to push through.

By this time Page had reappeared.

In fact he was there for the whole thing, Nadine having the presence of mind to send Bukovich looking.

"Piped right up, didn't he," said the proud father.

"Yep," squaled like a baby.

Casie assisted with back rubs, wet cotton balls to the lips, and solid reassurance.

Greth provided swabs, blankets, tie ties for the cord, scissors, and kortex from Nadine's well prepared stash.

At a finely timed moment, Buko came back with hot tea for all participants.

At press time the Farnsterners are gathering around the breakfast table, the afterbirth sliding merrily in the fire-place on the patio.

"That don't give up easily," says Page.

"Emergency, Says Craig. This cups broken."

Oh, brother, would you ever have your troubles. Not to speak of me and my baby— although our troubles might be strictly between us and the Keeper of the Gate to the next world!

I wonder how often it's happened that a bungled childbirth has destroyed a workable commune? Once would be too often.

So have your babies at home if you must, but for the love of God, send the girl to the local clinic for (1) prenatal care— the doctor will warn her if she's likely to have trouble. And even then it may come unexpected, as in my case, since I had NOT been so warned.

Send her STRAIGHT TO A HOSPITAL if she (1) bleeds, (2) has a history of toxemic ankles or any signs of toxemia impending as in the Merck Manual, or (3) if her first baby has been over seven pounds or if there is more than six or eight ounces increase between her first and second babies; that means the third may be enormous. This happens in pre-diabetic women who have no other symptoms. And finally (4) keep a telephone line open all the time she is in labor, so that if she manifests any trouble you can get hold of a doctor within minutes, preferably an ambulance.

One birth in ten shows complications; one baby in FOUR shows a birth defect— which can be aggravated if birth is hard or prolonged. Unattended births show the most serious oxygen starvation/oxia-injury which leads to mental retardation. And three births in a hundred are so complicated that without EVERY medical help you may have a death on your hands, without warning. Don't say "It can't happen to you." I said it couldn't happen to me— but I'd stuck to it and find to the hills to escape that dehumanizing hospital I'd be dead, or at best seriously damaged with a dead child, or brain-injured baby to raise. Have you ever seen a badly brain-injured child? Visit your local hospital for the feeble-minded some day. Most so-called "idiots" and "imbeciles" are victims of brain injury.

I dislike many, many of the fruits of civilization. But modern obstetrics is one I'd sooner not dispense with.

Sure, having a baby is natural. So is dying in childbirth. Look in any medical graveyard. Most men went through a few wives that way.

Love to you all,

Marion Zimmer Bradley (Brens)  
Staten Island, New York

## Birth at Home: The Precise Considerations

Many situations in medicine involve attempts to balance the costs and benefits of one possible course of action or inaction against the costs and benefits of another possibility, and to choose the alternative with the lowest cost/benefit ratio. Unfortunately medicine has often ignored psychosocial benefits to the patient and over-emphasized personal benefits and convenience to the doctor. Child-bearing is one such situation: the psychic benefits to the whole family of being present at the birth of a new child has largely been ignored, while the convenience to nurses, anesthetists and doctors has been over-emphasized. One result of this has been the "backlash" of interest in home deliveries, usually without the doctors approval, much less with his help. Without attempting to assess the psychosocial and reduced economic cost of home deliveries, I would like to clarify some of the risk variables involved.

In the best of situations, it can be expected that about 3 to 4% of deliveries will result in either a stillbirth or a child who dies during the first week of life. This figure can result in optimism—over 95% of women will have few problems—or pessimism—nearly one in twenty women will have prenatal death no matter how good their care.

Because of this situation, such generalized statistics are worthless to the woman thinking of having her baby at home. Adding to the confusion is the knowledge that British and Dutch women routinely have their babies at home with apparent success judged by their lower overall infant mortality than ours. Their success however is dependent on the statistical knowledge of which situations are likely to be complicated—necessitating hospitalization and specialist care—and which are very likely to be uncomplicated—necessitating only routine measures available to a midwife in the home.

Steward Clifford, a leading expert on high-risk pregnancy, states: "It should be emphasized that in every case the identification of the high risk patient should be possible at the initial examination and at various times in the pre-natal course and before labor and delivery." What are these risk factors and how can they be recognized?

First there are demographic factors. Women over forty or first pregnancies over 35 are more risky than average. Low education levels and low income are also high risk factors, even when good medical care is obtained.

Next is prior obstetric history: first births are higher risks as are fourth or greater. Infant mortality is high for patients with a previous abortion or ectopic pregnancy. In a previous pregnancy, it is even higher if there is a history of previous premature births (weighing less than 5 1/2 lbs.) and/or higher still for those women with a previous history of stillbirths or neonatal deaths. A history of a large baby (greater than nine pounds) or a baby requiring transfusion is a danger signal. Prior high blood pressure, marked swelling of hands and ankles, or protein in the urine during a previous pregnancy are further cautions.

Any woman with heart disease, diabetes (or a strong family history of diabetes) or any kidney disease should be followed closely by a doctor throughout pregnancy and delivery.

During the pregnancy there are also warning signs which preclude home delivery. Without attempting to explain the disease entities involved, suffice it to say that any vaginal bleeding after the first month of pregnancy (except very light spotting or "show" at the beginning of labor) or any report of high blood pressure is sufficient to necessitate specialist care.

As delivery approaches there are more clues, including rupture of the bag of waters before the onset of vigorous labor; labor beginning before the thirty-eighth or after the forty-second week of pregnancy (counting from the first day of the last menstrual period); if nothing is going wrong up to the onset of labor, but labor has progressed for eight hours without births being imminent, this is another indication to rush to the hospital.

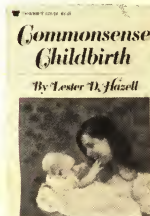
In summary, if you are between twenty and thirty years of age, a high school graduate with a fair income and good nutrition, with one or two but not more than three previous uncomplicated births, and no medical problems, you may begin to consider home delivery as an acceptable risk. Your first step toward success is to have adequate prenatal care (mortality is much higher for women without prenatal care, mainly because of avoidable complications) beginning no later than the third month of pregnancy. You will still not be completely safe from unexpected complications, but you will have reduced the risk to proportions where the benefits to you and your family from home delivery may for some families be great enough to make these risks acceptable. But to fail to reduce the risks through prenatal care or to ignore any danger signal is to not only invite disaster, but also to bear the responsibility of knowing you didn't do all you could to avoid the disaster.

Bruce Ferguson, M.D.

## Commonsense Childbirth

Mrs. Hazell writes from the personal experience of having had one child under anesthesia, another using La Maza method, and a third at home. The book covers pregnancy, birth, and care of the baby. It is gently positive about husband-coaching and breastfeeding. There's a good chapter on home deliveries. It's written by an intelligent woman, and it doesn't needlessly complicate what is really a very simple method of controlled breathing and relaxation.

[Reviewed by Pam Smith. Suggested by Judith Bass]



Commonsense Childbirth  
Lester Dessez Hazell  
1969; 243pp.

\$1.25 postpaid

from:  
Tower Publications  
185 Madison Avenue  
New York, New York 10016

or WHOLE EARTH CATALOG

My own point of view on home delivery is influenced by the fact that all my experience with it has been positive. Babies born at home seem better to me in every respect, and my students who have had both home and hospital deliveries prefer home. These babies are born crying and healthy, and with their mothers they continue in the pattern of life they have been living the last nine months.

What a mother eats has a profound effect on the outcome of her pregnancy and on her baby's start in life. A number of very convincing studies the complications of pregnancy to a poor-quality diet. Not only do many minor annoyances of pregnancy vanish when ample amounts of necessary elements are added to the diet, but the baby is basically affected as well. One study found that 94 percent of babies born to mothers whose diet was excellent were perfect specimens, whereas 92 percent of babies whose mothers' diets were inadequate in as little as one element were defective in some way. It has been my observation that the women who feel on top of the world are usually the ones who take good food seriously and concentrate on eating types of food that contain the raw material with which to maintain health and manufacture a healthy baby. . . .

## Happy Baby Food Grinder

When it comes to tools for child-rearing, this item is second only to the human breast in human feeding problems. Better than a blender, it can easily be carried wherever parents go, to grind table foods up to proper consistency for small infants through toddlers.



[Suggested and reviewed by  
Mrs. Ruth Rutherford]

Happy Baby Food Grinder

\$4.20 postpaid

from:  
Dolly Lundberg  
4036 Waterhouse Road  
Oakland, CA 94602

## Happy East Coast Babies

I have information regarding another supplier of the *Happy Baby Food Grinder*. It would be beneficial to East Coast readers. It is as follows:

Bowland-Jacobs Manufacturing Co.  
3 Oakdale Road  
Spring Valley, Illinois 61362

Mrs. William E. Kelley  
Hosick Falls, N.Y.

You certainly don't have to become a nutrition expert, however, to provide yourself with high-quality food. The trick is to keep your eye on how much protein you eat and at the same time to see that you get something every day from each of the four major food groups: 1) meat-egg; 2) milk-cheese; 3) vegetable-fruits; 4) bread-cereal. If you want to use a mnemonic device, we can call this the P-4 plan: Eat lots of protein in each of the basic four every day.

As soon as the bearing-down reflex is established, second stage is begun. For the next few contractions you push your baby down two steps, and he slides back one. This can be discouraging if you don't realize that this is the normal pattern of labor. However, when you stop to think about it, this makes good sense. In this way your passages are dilated gently and slowly by the plunging action of the baby, the baby has fluid squeezed from his lungs, his skin is stimulated preparatory to his existence in a world that will be constantly touching him, and then during the interval between contractions everyone rests.

What does the bearing-down reflex feel like? Everyone has experienced this to some degree. It is very like the pushing of a bowel movement, only more sustained and more demanding. It is far easier not to push when one is having a bowel movement than when one is having a baby. However, the second-stage contractions are not, as a rule, painful. In fact, they are very satisfying. You may be surprised at the noises you make. So may your family.

The first milk that flows is the high-protein, nonfat type. This fatty gushes into the baby's mouth. Later when the flow is slower comes the cream. The cream sticks to the baby's lips because it digests more slowly than the nonfat milk. It is also more filling. So it is providential that while the baby is nursing vigorously, the first flush of hunger, he does not get his high-calorie dessert. Entirely before ice cream is a habit formed early!

Thus a baby knows best how to regulate how much he should nurse. He does this according to the needs of his stomach as well as for the joy of cuddling with his mother.

The let-down of the milk is a conditioned reflex. In the early days of nursing the milk flows frequently at only the thought of the baby or even the cry of someone else's baby. Later this becomes conditioned to the particular baby's sucking. Hence the working mother can go all day long and not feed her baby, and her breasts will remain flat and comfortable. As soon as her baby takes a few sucks, the milk flows in any quantity he needs.

We know that gross brain damage rises in direct proportion to the amount of anesthetic medication given to the mother during her labor. The baby of an anesthetized and dopey mother will have been subjected to the same or greater degree (relative to body size) of anesthesia and drowsiness at a time when he needs to breathe well, and when his circulation should be operating at peak efficiency.

Yet the educated laboring woman finds that at every turn she must defend her position that she doesn't need anesthetic medication as one attendant after another presses her to accept such nostrums. She may even have to apologize for not wanting to take medicine which she knows could jeopardize her baby.

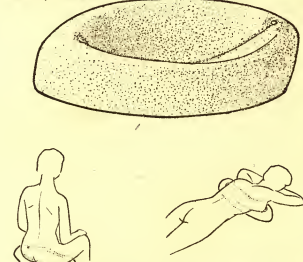
## Maternity Contour Cushion

Pregnant ladies can't lie on their bellies because there's no place to put the bulges. With this cushion there is. It's well designed, and the ladies say it makes a big difference.

—S-B

Maternity Contour Cushion  
Cushion with washable slip cover \$11.00 postpaid  
Cushion only \$8.00 postpaid

from:  
Maternity Contour Cushion  
Box 6101  
Stanford, CA 94305



After the baby comes, "tore bottom syndrome" relieved by sitting on the cushion

Before nursing, distended breasts relieved with cushion crosswise under the breasts



Thorax and pelvis rest on tapered ends of cushion.

## Preparation for Childbirth

This is a thoroughly practical handbook. The suggestions if followed for carrying, climbing, lifting, breathing, and conscious relaxation are sound suggestions for the pregnant woman or anyone, for that matter. One chart on the Relief of Common Discomforts that May Occur During Pregnancy matches a discomfort with an exercise or position to alleviate it. The book does not advocate "Natural Childbirth" but rather suggests that each person is individual in his need for anesthetics; its aim (by use of many illustrations) is to make pregnancy, childbearing, and post partum as comfortable as possible.

[Reviewed by Jane Stallings  
Suggested by Haru Bokker]

Preparation for  
Childbirth  
1963, 1969, 47 pp.

FREE OR CHEAP

from:  
Maternity Center  
Association  
48 East 92nd St.  
New York, N.Y.

10028

OUTSET OF LABOR  
If you are or a  
companion of  
labor, you will need to be back-  
ache, pelvic pressure, gas,  
menstrual cramps, etc.  
Nature of membranes

EARLY FIRST STAGE  
Early first stage of labor  
Contractions become strong enough  
that you feel need to do something  
Discomfort continuing, contractions  
becoming somewhat closer  
and stronger  
If contractions are coming back

Check signs, time contractions.  
Call doctor if needed.  
If daytime discomforts usual light activity  
activity.  
If night rest.

When contractions start, breathe out  
breathing through contractions.  
Try sitting upright (S)  
In between contractions, rest.  
Watch TV.  
Go to hospital as doctor directs.  
Pain as much as possible as  
possible. Do not give up. During  
travel and sleeping procedures.  
Use side, stretch deeply and slowly  
while rocking safely every gently  
throughout contractions (11)

## Childbirth Education

ICEA is engaged in furthering the cause of family-centered maternity and infant-care and believes in closer roles for the father during childbirth and periods before and after, breastfeeding, the La Maza natural childbirth method, and generally, further education about childbirth for all concerned. They answer specific questions about childbirth, help organize classes, and make available through the ICEA Supplies Center significant information on all aspects of childbirth education and family-centered maternity and infant care.

—Hal Hershey

## Information

from:  
International Childbirth Education Association  
P.O. Box 5852  
Milwaukee, Wisconsin

Catalog

free (presumably)

from:  
International Childbirth Education Association  
208 Ditty Building  
Bellevue, Washington 98004



## PART FIVE



## CROSS THE BRIDGE

There goes D.R. Deavenport, David Rey some folks call him, across the bridge into Kentucky, flipping the bill through Bill Monroe and his Bluegrass Boys to the Reverend Archie Turner saying Jesus on the main-line, tell him what you need, everybody here loves Jesus say amen. D.R. said amen and roared on across the bluegrass toward the range of hills that stretched across the windfield like the jagged spine of some old dinosaur.



I'd like to see La Leche League added to the Catalog right in there with Dr. Spock. The League is a non-profit organization of nursing mothers, whose purpose is to encourage and counsel other women who want to breast-feed their babies. They feel that nursing a baby is an art, best learned from someone who has done it. Most women these days find their doctors, hospitals, relatives, and friends and tactically bottle-oriented end the League can really be a help in standing up against them.

They publish a "manual", THE WOMANLY ART OF BREASTFEEDING (\$3.00 paperback, \$4.00 hardcover) and a bi-monthly newsletter (\$2.00 a year plus 25 cents postage) both available from their central office, La Leche League International, 9616 Minneapolis Avenue, Franklin Park, IL, 60132

Local League groups in most parts of the USA and in some other countries meet to talk over the advantages and the problems of breastfeeding and to trade experiences. The central office can tell you where the nearest group is or can tell you how to start your own; they'll give you telephone numbers of League mothers to call for help.

I'd add from my own experience that nursing a baby is a great thing and that the League, though its composition varies from place to place, usually attracts interesting women whose concern is for PEOPLE more than things or images.

Christine Mulford

## Snuggly Baby Carrier

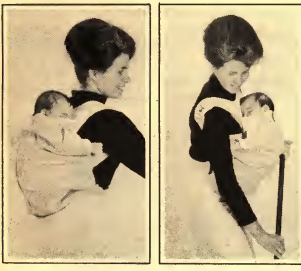
This is the most useful baby carrier I have ever seen. It can be used with a day-old baby, because of the head support, as well as a 2 year old—but not simultaneously since to enlarge the pack tucks are taken out as the baby grows.

A Snuggly provides a mother with a baby carrier that allows her to have both hands free. New mothers can attend classes, work, shop, do housework, etc. without having to find a babysitter. Needless to say babies love it. If you can't stand to live with a colicky baby, put it in this pack and fix dinner or whatever.

The Snuggly is of extremely high quality (will bear several machine washings and dryings per week) and teething, being stuffed in purses and being left in the rain.) It is very comfortable as long as the shoulder straps are kept tight so that the weight is not carried on the small of the back.

I recommend this as second only to diapers to prospective parents.

[Reviewed by Mary Jane Markley,  
Suggested by Chris Brown]



Snuggly Baby Carrier

\$28.95 postpaid

from:  
Snuggly  
Route 1, Box 685  
Evergreen, Colorado 80439  
or WHOLE EARTH CATALOG

## The Womanly Art of Breastfeeding

Want to nurse your baby? The Womanly Art of Breastfeeding prepared by the La Leche League offers a complete guide of "how to", as well as a philosophical treatise on "why to".

Chapters include suggestions on how to prepare the breasts, how to get reluctant hospitals to cooperate with breastfeeding, how father can help, and weaning processes. In our opinion the book represents the most complete and useful information available concerning breastfeeding.

[Reviewed by Jane Stallings,  
Suggested by Christine Mulford]

## Nursing Your Baby

Nursing Your Baby by Karen Pryor (Harper & Row 1963—\$57) which you really ought to hit by the way, has a picture of a baby carrier fashioned from 2 yards of fabric— we took 1/2 of an old sheet and tied it appropriately, and discovered that it is much more comfortable than even the Peterson carrier. This at a maximum cost of \$1 if you buy a 2 yard remnant. My sister with her super big little boy used to use a back carrier once he got over 15 lbs (quite young), until she started to use a bedspread folded African style. So— why don't you ask the SNUGGLY reviewers to try the cloth folding (which more people could afford) and see if they don't like it as well. If they do, we have a cheaper and easier to obtain book. Nursing Your Baby by Karen Pryor— In my opinion is a more complete & useful compendium of information on breastfeeding than even The Womanly Art of Breastfeeding. The Womanly Art... has a treatise but women's place is in the home and who would want time off from her baby? Karen Pryor is more realistic. 84 hours weeks get to be a drag, particularly when they are suddenly change from an autonomous, interrelated state. She has all the same facts as The Womanly... am more. The book is written in a very easy going mystical style— Aw! just read it, and you'll know what I mean!

This is not to put down La Leche League— they are one of the greatest single forces enabling women to succeed in breastfeeding today. If you want to breastfeed, and don't have at least 2 close friends who did for at least 6 months, you stand a better chance if you'll find your local La Leche & LLLs. Not that breastfeeding is technically difficult. It's the know-nothing doctors & neighbors that make it so.

Lynne Gale  
Arlington, VA.

## Swedish Milk Cups

For nursing mothers, these are a real boon, especially during the first few months after birth when your breasts have not completely regulated themselves to your baby's needs.

Swedish Milk Cups are made out of strong boilable plastic and are composed of two pieces. The front part looks like a hubcap with a small air hole at the top. The back part looks like a very thin warped donut. They fit together securely and fit over the nipple inside a nursing bra. What they do is collect excess milk. That means you can sleep through the night without waking up in a pool of milk, which often happens at first when your baby gives up the middle-of-the-night feeding.

I used the extra milk for mixing with our baby's cereal, or froze it to have on hand to leave with babysitters. I wish I had had milk cups when my milk first came in, two days after birth. I was engorged (a common occurrence) with too much milk and was quite uncomfortable for three days. The milk cups press lightly on the areola (the milk duct area around the nipple), and if your breasts are too full, they alleviate the situation by squeezing extra milk out.

They are also excellent to use in the treatment of sore or infected nipples because they keep pressure off the nipples and allow air circulation. And they are good for people with flat or inverted nipples. Wear them during your last month of pregnancy.

I am now in my ninth month of nursing our baby and I still wear mine occasionally. I attribute the never ending milk supply to healthy eating and nutritional yeast. Swedish Milk Cups can be ordered from Marianne Alstrom, 34 Sunrise Ave., Mill Valley, CA 94941, 388-3660. They cost \$5.78 which includes tax & postage, and are worth every penny.

Jeanie Darington  
Miranda, California

## Teething Biscuits

Teething biscuits: I use Milkbone Dog Biscuits, they are not crumbly, gooey, sugary. They are the right size and shape, and are made of more healthful ingredients. Any other dog biscuits would probably serve as well.

Barbara Bauer Schenker

## The Womanly Art of Breastfeeding

1958, 1963, 166 pp.

\$3.00 postpaid per.

La Leche League International  
Franklin Park, IL, 60131

Who who nurse our babies have often been agreeably surprised to note that when the rest of the family comes down with a cold or flu, the baby remains free of it. A breastfed baby is the least of developing pendulous breasts. Proper support during pregnancy and the avoidance of obesity both needed whether you plan to nurse or not! are all that is necessary to keep you in good shape.

Many studies indicate that nursing your baby will improve your chances of avoiding breast cancer.

Don't Nursing Spoil the Shape of My Breasts?

On the contrary! If breastfeeding has any effect, it will be to improve your figure. The bigger here is the fear of developing pendulous breasts. Proper support during pregnancy and the avoidance of obesity both needed whether you plan to nurse or not! are all that is necessary to keep you in good shape.

## Niuk Orthodontic Exerciser

Pacifiers are something babies love and parents worry about. Most pacifiers are made in such a way which may cause the baby's mouth to maladapt to the device, which may result in dental problems later. The Niuk pacifier was designed by an orthodontist, originally, as a therapeutic tool for correcting oral abnormalities. It is constructed so that every aspect of it has a precise function, and thus aids the proper development of a baby's mouth and teeth. In addition, it is also boil-able; it contains no go to ooze out and concern mother; and 3rdly, the shield is shaped like a happy baby smile—no more of that "plugged" look! The Niuk Orthodontic Exerciser can be found in discount department and drug stores from 44-49 cents. It is available from the manufacturer at its standard price of 59 cents (Reliance Products Corporation, Woonsocket, Rhode Island) Item No. 530.

[Reviewed by Barbara Bauer Schenker,  
Suggested by Lisa Law]



1. Soft, hollow oral baglet collapses and expands readily during sucking and oral actions.

a. Broad, curved top (palate) side conforms to palate and arch of mouth.

b. Tongue rests in proper position on bottom or concave side.

c. Forward inclined planes contact upper and lower arch elements and collapse and expand during sucking.

2. Flat passage encourages baby to close lips and helps nasal breathing.

3. Curved shield gives indirect contact with upper dental arch through firm contact with upper lip. Angled position of baglet leaves free space between lower part of shield and lower lip, thereby allowing jaw to work forward and backward.

## Population Services

Here's a non-profit organization which supplies contraceptives, at low cost, by mail. Condoms and contraceptive foam are their main items, but they also have several books and publications with useful information and low prices. They have a policy of charging lower prices to young and unmarried people.

—Hal Hershey

Items: 1. We no longer have the Turettan Pregnancy Test kit as it wasn't reliable enough. 2. We are starting up on a mail-in pregnancy test service— 2 to 4 days results depending on the mailman. 3. We had to split our non-profit and sales operation thanks to good old IRS. Sales are now through Population Planning Associates, P.O. Box 2556, WEI, Chapel Hill, North Carolina 27514. 4. We'd like to offer a ten percent reduction on all prices to all Whole Earth Catalog readers. 5. We have gotten exclusive distribution rights to two fine English condoms and now carry Naturalhums too (see enclosed blurb). We'll be supplying a couple of more top brands soon. 6. Note our sample package—it's going good.

Peace,

Diana L. Altman  
Population Services, Inc.

## Information

from:  
Population Services, Inc.  
P.O. Box 1205  
Chapel Hill, North Carolina 27514

Condoms	1 Dozen	3 Dozen	12 Dozen
Sutton, Plain Translucent	\$2.45	\$4.95	\$14.00
Sutton, Wet Lub. Glycerin	\$2.45	\$5.75	\$16.00
Koin-Pak Gold Foil Coins	\$2.75	\$5.50	\$16.00
The Huggo Form Fit Dry	\$2.75	\$5.50	\$16.00
The Centure Silicone Lube			
Formed	\$3.00	\$6.00	\$18.00
The Trojan, The Old Favorite	\$3.00	\$6.00	\$18.00
Foams			
EMKO Complete Foam	\$2.75		
Kit			
EMKO Aerosol Refill (45 gm.)	\$2.55		

## Women and Their Bodies

If anyone has any doubts left that women can really get it together, they should have a look at this book. It's written by and for women and is a masterpiece. The subject is our bodies—our relationship to them, to ourselves, to men, to each other, and to our society. It makes me feel very special but in no way unique—a warm and wonderful feeling. It's a political book in the best sense of bringing it all back home and making it clear how we got here and where we need to go. It's full of good solid information which is presented in a tone totally different from either the usual medical presentations, or the "just relax sweetie, and I'll tell you where it's at" tone of some women authors. If you don't think you have any questions about your body, you'll probably be surprised. And if you're looking for a stronger, clearer sense of yourself as a woman, you'll be satisfied. What it reminds me of most is a woman's body—intelligent, warm, soft, inviting.

[Reviewed by Diana Shugart.  
Suggested by Jane Pincus]

## Women and Their Bodies

Boston Women's Health Collective  
1970, 193 pp.

\$0.90 postpaid

from:  
Boston Women's Health Collective  
791 Tremont St.  
Boston, Mass. 02118

Masturbation is not something to do just when you don't have a man. It's different from, not inferior to, sex for two. It's also the first, easiest, and most convenient way to experiment with your body. It's a way to find out what feels good, with how much pressure, at what tempo, and how often. You also don't have to worry about someone else's needs or opinions of you. The more you know about your body, the easier it is to show someone else what gives you pleasure.

To masturbate you have to know something about your body, and in particular about your clitoris (clit) — a small, sensitive, round ball of flesh located above the opening of the vagina, and it is the center of most sexual stimulation. It functions like the penis in the man. When it's rubbed up and down rhythmically, you get excited. The clitoris is where all female orgasms happen, whether by masturbation, intercourse, or fantasy.

Some women masturbate by moistening their finger (with either saliva or juice from the vagina) and rubbing it around and over the clitoris. The amount of pressure and timing seems to vary among women. Some women masturbate by crossing their legs and exerting steady and rhythmic pressure on the whole genital area. A smaller number learn by developing muscular tension through their bodies resembling the tensions developed in the moment of intercourse. Some ways of doing this is by climbing up a pole or a rope or even chinning parallel bars. Other techniques for masturbating include using a pillow instead of a hand, a stream of water, and electric vibrators. Some women find their breasts extremely sensitive, and while rubbing the clitoris. It's nice sometimes to make up sexual fantasies while masturbating. Some women like to insert something in the vagina while masturbating, like a finger or vibrator) but few women get more satisfaction out of vaginal penetration than they do from clitoral stimulation.

If you never masturbate, don't feel you are confined to these techniques. Finding what you like to do is what it's all about.

## A Better Pill

On the cover of our March 1969 Supplement we printed a rumor:

**SYNTEX, DEVELOPERS OF THE PILL, HAVE DEVELOPED AN EFFECTIVE APHRODISIAC AND DON'T KNOW WHAT TO DO WITH IT.**

We also printed our correspondence with Carl Djerassi of SynTex. We are even more convinced the rumor is true.

Dear Dr. Djerassi:

If inconvenience is caused by our report, I apologize. However the rumor preceded our notice of it, and identifying it as a public rumor rather than a public fact may be helpful. Any reply you care to make we are glad to publish along with the rumor.

Whether the rumor be true or false, it is maintained by desire for its truth and will probably continue until it gets what it wants: an effective aphrodisiac on the public market. The human advantages and disadvantages of such a drug are obviously self-evident. It is a matter of choice whether to use it. It is not a matter of choice whether to use it. What I would like to particularly stress, and it is the main purpose of this letter, is that the need for a double-function aphrodisiac-combination aphrodisiac and birth control pill.

World famine versus heavy governmental controls over sex behaviour is no pleasant choice. If technology such as yours can design around the problem and encourage personal incentives to population control, there might yet be a pleasant choice. The public consequences of a cheap, legal, effective aphrodisiac would no doubt be wild and noisy, putting the psychedelic furor in the shade. Surely a revolution of pleasure-finds is preferable to world conflict between starving populations. It's not that simple, I know, but before the Combination Pill can be realistic, some laws and attitudes are going to have to get out of its way.

Perhaps the Combination Pill could be called Make Love Not War. Stewart Brand

Dear Mr. Brand:

I think that you have given our SynTex technology too much credit. If we have developed an effective aphrodisiac, our laboratory people have certainly kept the whole business very quiet.

New drugs are approved for use on the basis of demonstrated relative safety and efficacy. The more serious the disease condition, the greater degree of risk is acceptable. There is nothing in the present regulatory system to accommodate the idea of the validity of drug induced pleasure, erotic or otherwise.

Your proposed oral contraceptive and aphrodisiac combination will indeed be a large pill for the FDA and the medical profession to swallow even if it has the favorable social effects you attribute to it.

Yours sincerely,

Carl Djerassi, President  
SynTex Research

## How to Adopt a Child

If infertility or population concerns are frustrating your desire for children around the place, adoption can be an adventurous solution. This book details what you can expect in adoption procedure, compares the adoption regulations in the various states, and lists all the U.S. adoption agencies. Roy Rogers and Dale Evans adopted a whole rainbow of kids from overseas. —SB

In recent years, once a home is approved by the agency, placement of a child almost always follows. Further, the time necessary to determine home eligibility has been steadily decreasing. The average time necessary for a private agency to approve or disapprove a home or agency has dropped from nine months to six months in the period 1958 to 1962. In the same period, public agency time required dropped from six months to four months.

Agencies have also grown more flexible about their age requirement in recent years. Similarly, the number of years a couple has been married is not as important as it used to be. Religion is another area where agency policy has become increasingly more flexible. Even the fact that applicants have natural or other adopted children is of declining importance. Agencies are becoming more concerned, as well they should be, with finding the proper home, one where the child can grow up in a stable and understanding environment. Of course, the adoptive parents still have to satisfy certain statutory requirements (as well as other requirements that the agency might impose), and these requirements are less susceptible to change.

To sum up, there are an increasing number of children available for adoption, and agencies are reacting to this trend by being more flexible in many critical areas.

In recent years, the number of white children adopted has been approximately ten times greater than the number of nonwhites adopted. However, nonwhite adoptions are increasing at a faster rate than white adoptions.

hair wants and needs. Listen to what she says, and if you can, do what she asks. In the long run you should try to change your own life, and the society, so that you can be pleased with and proud of yourself without having to exploit her. For either of the sexes to be free, both you and she must be leading worthwhile lives.

Norinyl-Ortho-Novum

These pills are the same, just made by different companies. Norinyl contains 2 mg. norethindrone and 0.1 mg. mestranol, as does Ortho-Novum (2 mg.). The Ortho-Novum (10 mg.) contains, as the name states, 10 mg. norethindrone rather than 2 mg., and also contains 0.06 mg. mestranol rather than 0.1 mg. The pregnancy rate for both pills is about 0.5%. They are considered the best pills for the minipill for pregnancy prevention. Norinyl is made by Syntex Labs, Inc., Palo Alto, California, and Ortho-Novum by Ortho Pharmaceutical Corp., Raritan, New Jersey.

As these pills are androgenic, they should not be given to women with much body hair, unless those women like more hair. They produce longer periods because they favor a thick endometrium, not very suitable for an egg to implant upon. Derived from 18-steroids.



At this time our demands should include: 1) availability of life supporting mobile units to all homes; 2) doctors deliver babies at home until 3) there are enough trained midwives to take the place of doctors. We woman want to have our babies in safety and in comfort. And we will not be satisfied until this is a right of all women.

How to Adopt a Child  
Robert A. Ferner  
1967, 1968, 153 pp.

\$4.95 postpaid

from:  
Arc Publishing Company  
219 Park Avenue South  
New York, N. Y. 10003

or WHOLE  
EARTH  
CATALOG

The proper procedure for adopting a foreign orphan is by means of an authorized placement agency. Two such agencies have handled the major part of United States placements of foreign children. These are the International Social Service and the National Catholic Welfare Conference. These agencies have been able to supply foreign children to American couples in most cases for a fee of less than three hundred dollars.



BIG HILL

In the section of Kentucky where the bluegrass and the eastern mountains meet, near Berea, one of the major landmarks is Big Hill. There are several distinctive hills and knobs and ridges in this vicinity, but Big Hill is the dominant land mass for several miles around. For travelers on U.S. 421, the bottom of Big Hill represents the precise dividing line between the flat lands and the branch of the Appalachian Mountains known as the Cumberland Plateau. At the bottom, the traveler headed west is entering the Kentucky bluegrass country. From the top, he faces a range of hills flowing south and east for more than a hundred miles, until they are finally broken by the broad agricultural valleys of Southwest Virginia and East Tennessee.

(continued)

Sex  
Community

221



Women in Communes

"In addition, in marriage, in every way, disappointment is the lot of women. It shall be the business in my life to deepen this disappointment in every woman's heart until she bows down to it and knows the truth." —Leo Tolstoy, 1888

The first time I picked up an ax, I felt a sense of failure. Twenty-two years of inactivity, a few isolated attempts—pretending to paint the house with water while my brother, who was only a year older than I, did the real job, or being told to do the dishes instead of mowing the lawn.

What I have learned about the ax is true of most kinds of physical work: use your head, and the ax does the work for you. I learned to hit the log first at one angle, then at another, forging a "V" into the wood. I learned to pick the log up by the wider end and had to be that the ax should come down of its own weight, guided by the hands, and that the arms and body should follow through, twisting a few degrees at the end of the stroke. The hard work—keeping the log and I got tired very easily. The second day was not so bad. Now I'm no longer afraid of the ax. There are different kinds of weakness—the kind that grows in the mind, the kind that grows in the body. If I never had the ax, I would be the weakest of weaklings by bullshitting myself by assuming you can do something.

The world we live in moves so incredibly fast that it is very easy to avoid what we can do, and more important, what we are to do. Conditioned we are—for instance, any woman who lives in the city can pretty well avoid needing to use an ax. And most white middle class women (and men) assume that such activity is beyond the scope of women's potential, calmly ignoring the trusty old pioneer women, the women in rural areas who still chop wood every day—and even the ones who live on the still affluent but less civilized city outskirts who now work a hard day to earn a wage that barely supports a family, that work as their own housekeepers for no pay and no recognition. The assumption that women are "weak things" is a middle class luxury. For lower income women the opposite myth is more common—women are good at tedious (and physically difficult) shift work.

Certain tasks have to be done every day in nearly every living situation (although we often exaggerate actually doing the essential: similar to the "both a lion and a cruel oppressor," the world never offers us a chance to "start again," with a lump of labor and a group of unidentified human beings, so that everyone can decide what he or she really prefers to do, and in the process become not just a worker, but human).

Something approximating such a chance occurred this summer for a small group of people living on a farm commune. There were twelve of us, give or take a few, for most of the summer, doing work consisting of planting, weeding, pulling, hoeing, and harvesting, as well as chopping wood, cooking over an open fire, washing clothes, and keeping the tents and the camp clean. There

was no running water, which made housekeeping chores a little more difficult, and no electricity, which meant that some of the work, like washing the dinner dishes, was usually done in the dark.

Even though there was no society-dictated division of labor, even though we had complete freedom to determine the division of labor for ourselves, a well-known pattern emerged immediately. Women did most of the cooking, all of the cleaning, and, of course, the washing. They also worked in the fields a day or so after the farm work was finished, the men could be found sitting around taking and taking naps while the women prepared supper. In addition to that, one of the women remained in camp every day in order to cook lunch—it was always a woman who did this, never a man. Of course, the women were excused from some of the tasks, for example, the chopping of wood, but they were considered too complicated for a woman. We never would have had to haul wood or chop it if we hadn't wanted to.

Does this story sound exaggerated? I think it is true that even men who are not in complete liberation of women would tend to react the same way in a similar situation, as the result of conditioning. It is true that to some extent our group was free of the dictates of society last summer—but of course we weren't free for our cultural conditioning, which exists outside the society's institutions, and is, in fact, embodied in the individual. The men in our group were exhibiting a collective system of belief based on early training.

The women, too, had much to overcome, and we had to consciously organize ourselves for less oppressive conditions which we were partially responsible for creating. We were not all women, and most of us were unattached; we were all between the ages of fifteen and twenty-four; all of us had thought and read, in varying degrees, about the problems which women face. We began holding private caucuses in the woods, far enough from camp so that we could feel free from any stray masculine ears. These meetings were held in secret, and the men in the commune, but they were considered a declaration of war by the men in camp, and in a sense we determined that a sign of secession from the normal order of life as pre-determined by the men, and by our own maimed

In the meetings we discussed day to day experiences in the camp, related them to what we had gleaned from the past and the condition of women in general, and began to educate ourselves by reading and sharing general knowledge. The men were a total re-orientation of our images of what we could and could not do. One of our tactics was complete non-response to hostility on the part of the men. We had to learn to differentiate between legitimate attempts to discuss women's liberation, and their harassment. To the former we would willingly respond, but latter met with neutral silence. In order to forcibly shift the division of labor, we began doing other chores around dinner time. Collecting and chopping wood was an activity which was often neglected in the course of the day, so after our regular farm work, we would return to the wood instead of the pots. We tried to discover and do things that

needed to be done for the maintenance of the camp—building rather than cleaning.

If a tense situation arose, where a sister was uncertain how to react, there was usually another sister nearby, and, unlike a hand on the arm, or just the knowledge of concern, helped everyone keep calm. We felt that consistency and complete discipline in regard to our willingness to work were of utmost significance in showing

to make that our intent was not to humiliate them, but to work toward a more healthy environment for everyone concerned. Our experiment was a colossal failure. In analyzing what went wrong, it is probably unfair to place the blame on the men's inability to understand. Yet, as a woman, that is the only conclusion I can come to. A lot of dusty old myths were dragged out and shoved in our faces... you don't work fast enough; a man can't even get a decent meal around this place unless he cooks it for himself; before you learn to drive a tractor, learn to get the dishes clean (I don't want you fucking with my tractor, baby); there is something wrong with your sex life! You want to be just like a man...

For several weeks we lived in two separate camps. If we went gathering wood at dinner time, the men cooked—for themselves only. They washed their own dishes, but never the pots and pans that the food had come from. In the field we were a separate women's brigade—all day we worked together and talked liberation, separate from the men.

Those were happy days! Left alone, we taught ourselves, feeling free to be clumsy at first, knowing that we wouldn't laugh at each other. I think we all began to develop confidence in our ability to do things, and my own physical endurance increased tremendously—I had no reason to let a man take care, ever. I think my sisters and I learned to love and value each other as women solid as when they are divided from each other and forced to compete for recognition. The men in their camps were not doing much in the same way that capitalism forces men to compete against each other. In each case, it is the best position in the pecking order that determines how people act toward each other.

The fact that half of the women involved with the farm commune project are no longer here, and that the other half are consciously compromising in order to insure the success of the farm, is a testimony of the long fight which we all face. The inability of men to respond to our attempts to liberate ourselves seems to be an indication that now is the time to isolate, to learn, to build, and if necessary, when we have the strength, to force a change that must come if we are to be free. Re-education, through the breaking of boundary conditions on behavior, will have to occur, and can only occur, through a conscious re-orientation of our own self-images.

By Kit Leder  
Originally Published in  
Women: A Journal of Liberation

Diana's Rap

I successfully avoided dealing with the whole women's lib question for months. Faced with the necessity of working on these pages, I sat myself down and read Time's spread, and Life's and a bunch of other stuff. And I came to realize why I'd been avoiding it. I've been relating to all kinds of far-out movements for years, but this time, I couldn't identify. Sympathetic, empathize yes, but the evening's reading left me feeling terribly sad and alienated from a scene that somehow should be my scene too. Nearly all the literature refers to the rare exception—the woman who has somehow "overcome" all these cultural patterns and makes her own decisions, leads her own life, does her own thing. Well, I don't at all enjoy feeling like an "exception," and I was never aware of overcoming great obstacles—male or otherwise. I've simply been leading my life and making my choices and sort of assuming everyone else was too. I have been: a secretary, a lab technician, a clinical social worker, an encounter group leader, a wife (for one year), a student (for six years), a lover (ess?), a political activist, a probation officer (for one), a waitress, a housewife, and a woman with male counterparts. I haven't ever been: pregnant, married for ten years, a mother, a full-time housewife, or lots of other things which I realize form some of the experience from which women's lib springs. I'll be 30 next year.

I have also never felt completely satisfied and fulfilled as a woman and as a human being. Neither has anyone else I know, and that includes men. I do remember once a woman I was working with confronting our male co-workers with a very passionate plea, "You see me as a woman, and I see you as a man. I don't want to be a man—I wish you'd remember I'm a HUMAN BEING!" It blew my mind, and I jumped in with my, "I feel just like the opposite—you see me as a competent, talented, strong, and you forget I'M A WOMAN!" Whereupon I burst into tears and ran out the door. "I'm JUST a woman! I shouldn't HAVE to be as strong as you are; I need also to feel helpless, dependent, and weak as sometimes". Well.

SEVEN MONTHS LATER:

Wince, shudder. I wrote that six months ago, & now I want to say, "I don't like it back! I didn't know what I was talking about!" I take every word I would know to describe how my head's changed around and around, and I feel better & better & in such a direction, that I wince & shudder at what I wrote then. A lot of the women's issues are far more subtle & pervasive than I had realized, & getting into them has been a most satisfying experience, and still is. Becoming more aware of how we all are, indeed, oppressed, goes

I dig women's lib very much and appreciate a lot of what it's all about, and I find myself being affected by some of the thinking that's going on. I don't dig large parts of it—having spent a lot of years of my life in the liberal "international men's world" than in the conventional "women's world" (i.e. at home), I suspect a lot of women of over-romanticizing "the world out there". Thousands of men's jobs are at least as boring, tedious, repetitive, non-creative, that I feel I can do as housewife. I don't think I'm unusual. Nearly always there's less opportunity for physical movement during the day, for doing different things on different days, for listening to music while you work, for taking a nap, or doing a dance—in the men's world, I have found that's the freedom of being able to regulate and choose my own schedule to some extent. For possibly having sometimes four hours to prepare a feast, when the mood strikes, instead of the hungry, post-work day quick supper. I have certainly over-romanticized the life I've led. I've had a husband that will let me do what I please and deal with all that "business", babies, etc. The current sweep of women's lib inclines me a lot less toward these indulgences, and that's probably what I most appreciate. That and the freedom that's being fought for by us—that we suffer from their cultural roles at least as much as women do, and that the real problem lies deeper—lies, in both cases in a society and family structure which makes it very difficult for anyone to realize his full potential, or even any very close approximation.

On one level, I simply locked out. With three sisters and no brothers and a father who is so sure he's a feminist, I always felt there was plenty of room for me to define my own role, without a whole hell of a lot of respect for convention. I live in a commune now, with 5 men and 5 women, and we all take turns cooking. The women tend to clean up more, but the men always take care of the garbage & take care of the yard. Various of us work at various times, and perhaps our strongest implicit goal is for everyone to be able to live the way they most want to, without any "family structure", and without any recognition that everyone has to do their share of the chores. The sisterhood between the 5 women is the strongest

hand in hand with becoming more frustrated because we have so far to go. The most tolerant of environments doesn't go very far in these years (except of course of course) of our going around inside ourselves. The process of sharing & exploring with women helps a lot. For the first time in a long time, for me, there's been a kind of integration going on in my mind, getting my own experiences together with what's happening in the world in some kind of sensible way.

A couple of books that really turned me on: Sisterhood is Powerful edited by Robin Morgan (Vintage, \$2.95, whose introduction is worth a whole book in itself. And, in a totally different line, Doris Lessing's, or Colleen Lumsden's, story of two very un-liberated "liberated" women.

Diana Shugart

Photo from Women & Their Bodies

and most profound I've ever experienced—I think the same is probably true of the brotherhood of the men. I can't deny that we've all been affected by our cultural conditioning. Perhaps all I really want to say is that changes are being made, right here in our city: sympathetic male ears are available—my god, the last thing our men want is a bunch of submissive drudges around the house. Which isn't to say they aren't capable of feeling threatened by us. I experienced very powerful feelings myself when I walked into the kitchen and saw one of my "brothers" cleaning out the refrigerator, and whistling like a lark, glancing to himself, muttering and wondering what had got into him, and really enjoying himself thoroughly. What I've most about the commune that I feel like I can be a lousy woman to be—I can wait on the men (and the women, too, for that matter) and take great pleasure in it, and I can also argue with them, be hostile, be loving, be submissive, be rebellious, do someone else's thing, do my own thing, participate in our communal vision, etc. Just like a family should be. See, the thing is, I suspect that lots women could do all these things with their families too, if only they would. Your freedom is often, or largely, as much as you have the power to grab for and use. I can't say I've examined has been. And which isn't to say I can always do any, much less all, of the above. I figure I have a pretty tolerant environment, though, and it's my responsibility to get it on for myself. With a lot of help from my friends. Ok

—Diana Shugart

VICTIMIZED

Women's Liberation convinced me with the complaint voiced by Laura: "I resist having to sleep on the wet spot in the bed, and particularly resent being made to feel guilty about it."





# Death



Some moments after his death, all take their leave and the Brother Infirmary takes over. He first washes the body with care and then clothes it in a fresh habit. There is no embalming, and the only special items are that the arms are stopped up to prevent any draining, and a cloth band is wrapped around the head and under the chin to keep the mouth closed. We call the local hospital for a doctor to come out and remove the eyes for the Eye Bank, to which all the monks are subscribed, or else drive the body to the hospital if the doctor is tied up. We do not paint the face or anything like that, but simply pull his hood up over his head and fold his hands in his sleeves. If he is also a priest, he wears a stole. Then, when all is ready, the body is brought in solemn procession with the community to the monastery church. Since one of the monks is a doctor, the official declaration of his death and all the legal matters are taken care of by him and the local monk notary: the laws are quite detailed.

The body is laid out on a pallet or stretcher reserved for the purpose and is placed in the nave between the two rows of choir stalls. Then monks in turns keep watch by the body, two at a time, continuously until the burial. They watch in half-hour turns, reading the Psalms aloud to one another. The Psalms are good poetry and good prayer, and they do it well with the heart in the presence of death when you are alone with it in the deep of night. The Easter Candle is kept burning by the body as witness to our faith in the Resurrection: this is a big candle some four feet tall and as thick as your wrist. This with the large processional cross is used at all death rites. The regular Choir Services continue in the presence of the deceased monk, seven times a day, beginning at three in the morning. At such times the two by the body join the choir. The Choir Services are adapted to the event and are concerned with appropriate themes: time, eternity, death, life, resurrection.

The funeral Mass generally takes place the next morning, the Memorial Supper of the Lord. Such a Eucharist is quite filled with hope and with joy, and all eat the bread and drink the cup to faith in the life to come and in prayer for the dead Brother. After the Mass the body is sprinkled with blessed water and a thurible of smoking incense carried around it. Then the procession forms and we carry him out to the graveyard back of the monastery church.

There the Brothers have already dug a grave deep into the earth, sometimes with the help of compressed-air shovels, since there is hard clay and shale not far below. We gather around the grave and there are more prayers and readings, the grave is blessed and incensed by the Abbot. Then the Brother Infirmary goes down into the grave by a ladder to receive the body. Meanwhile the pall-bearers have lifted the body from the pallet on the quilt mat which has three long cloth bands on each side by means of which they lower the monk into the grave. The Brother down below arranges the body, slips the quilt out so they can pull it up, pulls the monk's hood down over his face, covers him with a white sheet, and then comes up the ladder. The ladder is removed and the Abbot steps up and scatters a first handful of earth over him in the form of a cross. The pall-bearers start to fill in the grave quietly and gently, beginning at the feet.

When the whole body is well covered they stop and the community leaves, after first kneeling on the earth to ask pardon for themselves and all men. A few remain to finish. Then a cross is erected over the grave and later on the name put on it. For some weeks after his death, a cross stands at the monk's place at table in the refectory to remind all of their Brother that they may pray for him. During the days after, the monks will be praying their Psalters for him that all may be well with him in the next life.

Such a monastic funeral is very simple and beautiful. There is nothing gruesome or morbid about it, nor anything phony or artificial. Death is recognized for what it is: the end of life on earth, and no attempt is made to hide this. The body is treated with reverence and love, but is not embalmed or falsified in any way. Nor do we use a casket or box, since the Brother is being returned to the mother which bore him and who will keep him in her depths until the last day.

Possibly the only one in the cemetery (besides an abbot who died while on a train trip) to be buried in a casket is Father Louis (Thomas Merton). He died in Bangkok and was given a military coffin and flown back to this country by the Armed Forces with other dead. Since there had been a long delay, the Abbot decided not to remove the body from the casket, no embalming having been done. The monks found the large casket in their midst somewhat incongruous, yet noted that it was perhaps fitting that the author of *The Sign of Jonas* should have been buried inside so large a fish. Father Louis was always fond of the genuine character of the monastic funeral, and we wondered that he did not in some way make it known to us that the real Jonas did not stay permanently in the belly of the whale. Other than that he had the regular monk's funeral.

Father Matthew Kelly  
monk of Gethsemani  
Trappist, Kentucky

## ♦ The Monastic Way of Death ♦

When a monk dies here, unless it is in the middle of the night, the big bell is rung slowly for a longer period, a signal for the monks near the monastery to drop what they are doing and come pray for the Brother that he might have a good trip into eternity. Generally a large number are on hand to gather around the bed and join in the prayers. (We do the sacramental Anointing of the Sick in church for any monk getting on in years or sickly, but long before he is approaching death).





*All things are in process, rising and returning. Plants come to blossom but only to return to the root. Returning to the root is like seeking tranquility. Seeking tranquility is like moving toward destiny. Moving toward destiny is like eternity. To know eternity is enlightenment, and not to receive eternity brings disorder and evil. Knowing eternity makes one comprehensive; comprehension brings nobility; nobility is like heaven. The heavenly is like Tao. Tao is the Eternal. The decay of the body is not to be feared.*

Lau-tse

(Peruvian Dance Song (Ayacucho))

Wake up, woman,  
Rise up, woman,  
In the middle of the street  
A dog howls.  
May the death arrive,  
May the dance arrive,  
Come the dance  
You must dance,  
Come the death  
You can't help it!  
Ahi what a chill,  
Ahi what a wind ...

Technicians of the Sacred

—89—

*The whole system of human life has been appreciated only in its ascendant aspects lately. We have entire industries—medicine, warfare—devoted to death-prevention, and a kind of pathological science has surrounded the event of dying.*

**Dick Albert, several years ago, proposed a Center for Birth and Dying. A place where, if you were going to die or**

*wanted to die, you go and do it in style, perhaps even grace. There would be whatever religious, pharmaceutical, medical aid you wanted. (If LSD has been proven to ease the departure of terminal cancer patients, why is it not in general use? What else enhances the experience of death?) The Center is also a place for natural childbirth, family supported, so that arrival and departure in this world are not estranged.*

—88—

## Do-It-Yourself Burial for \$50

Human bodies are an organic part of the WHOLE EARTH and at death must return to nourish the ongoing stream of life. Most of the billion dollars annually which Americans pay to the undertaking industry to dispose of corpses is sheer waste, both of money and of ever decreasing living space for posterity.

*I ain't there some way," I was asked by a widow, "that two or three of us could dispose legally of the corpse for a few dollars?" My husband's death left us badly in debt but I had to go further in debt to pay a funeral director because I didn't know what else I could do."*

Contingency Planning is the essence of a Do-It-Yourself Funeral. What we need is not so much to escape the clutches of a profit-motivated business but to remove our own vulnerability by preparing to do ourselves what needs to be done. Actually in usual cases it is quite easy. Nothing very "professional" is required that any poor man or woman cannot do themselves.

If you are going to act "in place of" a funeral director you have to get prepared well ahead and take charge immediately. There is not time to learn the ropes after death occurs. One cannot just copy the writer's experience, but I can give you a close idea of what to expect. Then decide if you want to take the trouble or just pay a professional to do the work for you.

The when and where of who of death is not always very predictable. It is best to have a group plan for one's family, church, union or commune. A burial committee of 3 persons, any one of whom can take charge, can be specified in one's last instructions, just so no one is paid.

*Take this example (in California):*

The grandfather entered keenly into the project to set his whole family an example. When he died here is how we carried out his wishes:

- 1) We got out his instructions which were left handy to get at. The other grown members of the family had each completed their own set of instructions—or specified that the same ones be followed. Three of us, a son, grandson and uncle were named, any one of whom were authorized to act as his "funeral director."
- 2) We went immediately to our County Health Department office of Vital Statistics and obtained a Certificate of Death form, showing our authorization to do so. We had already in advance obtained a copy of the form to familiarize ourselves with the information required. We filled in the details and
- 3) Took it to the medical doctor who verified the facts of death to complete the technical questions. In cases requiring a coroner's action the latter would do that.
- 4) Then the "person acting in place of" a funeral director completed the Death Certificate and returned it to the Registrar of Vital Statistics to become a part of the state's permanent public records. We applied for a certified copy of that Death Certificate and paid the \$2 fee. For another \$1 we obtained a "Permit for Disposition of Human Remains." These are needed to satisfy a hospital, possible police inquiry and to assure the receiver that he is authorized to cremate.

6) We went home and got out the six foot box which we had made long before from odd bits of plywood for \$5. The cheapest wooden casket sold for \$85 but why waste it! Some places do not even require a box for cremation.

7) After checking the crematory about delivery we took our box of remains there by pickup truck and handed over a check for \$40, the local fee which elsewhere varies. We presented the two certificates from the County Health office and signed the authorization to cremate.

The crux of disposal is the requirement on all these forms that one must specify a legal (i.e. cemetery or columbarium) place of final interment by name and address. In practice this means another \$150 or more for a plot or niche. Even strewing ashes at sea is made ridiculously complicated and costly—to discourage it. The lobby of the industry in this state has so far defeated all attempts at funeral reform which would permit relatives to keep the ashes at home or to strew them in the family garden or at a public (outside city limits) park or seashore. You may find that where you live it is perfectly legal to do this.

8) However, in this case Grandpa ordered his "funeral directors" verbally to finish his wishes as follows:

- a) fill in the name of a cemetery back in his home town to satisfy the statistical requirement.
- b) take personal custody of the ashes for delivery in a little box we made.
- c) then later scatter the ashes on the Sierra as he had privately ordered.

Most people would rather "pay the piper," even though they feel that final regulation is ridiculous and exploitative—rather than be forced to subterfuge. However, these last wishes were complied with discreetly and privately and no questions have arisen in this or other similar cases.

To complete this example I must report that two Sundays later friends and relatives gathered for a joyful memorial feast, to which all contributed, in honor of our departed. The full amount payable in "death benefits," \$1000, the deceased left in a scholarship savings account for a couple of his grandchildren.

For your further study get through WHOLE EARTH CATALOG Ernest Morgan's "Manual of Simple Burial," an excellent guide to lots of other business that needs attending to at the time of a death. Also join with others who are already organized to handle death simply and with dignity. The Continental Association of Funeral and Memorial Societies at 55 East Van Buren Street, Chicago, Illinois 60605 can direct you to one of their non-profit member societies near you, to which millions of families and individuals belong. Their voluntary elected officers can help you, as they did us, to make your own family death contingency plans.

This popular procedure up to now seems to be an arrangement with local funeral directors who co-operate with a Memorial Society in providing minimal disposal service \$150 and up plus another \$150 or so for a cemetery plot or columbarium space. However, in the example given total burial costs were \$48.

Anton Nelson

## The death of Osceola, the Seminole January 30, 1838

*About half an hour before he died, he seemed to be sensible that he was dying; and although he could not speak, he signified by signs that he wished me to send for the chiefs of the officers of the post, whom I called in. He made signs to his wives (of whom he had two, and also two five little children by his side), to go and bring his full dress, which he wore in time of war; he was then lying on his back, he rose up in his bed, which was on the floor, and put on his shirt, his leggings and moccasins; he then took his war belt, his pouch, and powder-horn, and laid his knife by the side of his hand on the floor. He then called for his red paint, and his looking-glass, which was held before him, when he deliberately looked at the half of his face, his neck and his throat—his wrists—the backs of hands, and the handle of his knife, red with vermilion; a custom practiced when the irrevocable oath of war and destruction is taken. His knife he then placed in his sheath, under his belt; and he carefully arranged his turban on his head, and his three otter plumes that he was in the habit of wearing in the war. Being thus prepared in full dress, he lay down a few minutes to recover strength sufficient, when he rose up as before, and with most becoming and pleasing smiles, extended his hand to me and to all of the officers and chiefs that were around him; and shook hands with all in dead silence; and also with his wives and his little children; he made a signal for them to lower him down upon his bed, which was done, and he then slowly drew from his war-belt, his scalping-knife, which he firmly grasped in his right hand, laying it across the other, on his breast, and in a moment slid away his last breath, without a struggle or a groan.*

Colt, *The North American Indians*, Vol. II, p. 251n.

*The Indian in America's Past*, Jack D. Forbes, \$1.95 from Prentice-Hall, Englewood Cliffs, N.J. 07632

## From Newsweek

April 6, 1970

*"The city person usually asks me to spare no expense in order to keep a dying relative alive," observes Dr. Robert Leachman, director of cardiology at St. Luke's Hospital in Houston. "But the rural person who has lived his life in close contact with the cycle of nature accepts death more readily as a fact of life." . . . at one Boston hospital, . . . Kastenbaum found that the terminally ill had dubbed their wing "Death Valley." The dying were kept alive with drugs till their machine ran out. In time, however, the psychologist was able to cut the use of drugs by introducing a simple humor touch: once a day, the residents of Death Valley were allowed to throw an old-fashioned beer party.*



His father would say, "Right here now David's where old Boone got his first look at his new country. Stopped right over there by that mailbox, could see as far as he could see." He would grin then, and wait for David to respond. He made the joke two times every weekend, coming and going, but somehow it was always funny. David would begin to anticipate miles before his father would say it. He liked a story he knew but never got tired of hearing. His father would say, "Yes sir, old Boone was a real gun against that very mailbox yonder, and looked all around."

(continued)



How to Live on Nothing

(Our best selling book.)

This book has a lot in common with *Champagne Living On A Beer Budget* (below), but there's enough difference between the two to make them more companion pieces than competitors. The emphasis in *Champagne Living* is on the cheap accumulation of necessary things. How to Live on Nothing covers some of that ground too, but its main concern is the development of personal skills that you get free of the need to pay people like carpenters, plumbers, doctors and real estate agents to live your practical (that is to say, your *real*) or "concrete" life for you.

Of course there's no such thing as "living on nothing." The book would be more properly titled, *Living for Something*. For a curious, uninduced, Zen sort of way, that's what this book is about: living simply to establish familiarity with the details of your world, with ordinary local mysteries and miracles such as the wiring system in your house, the fabric of the garments you wear, the truth of the food you eat, and the fuel you burn. Behind the information, the advice, the hints, and the facts, this book is about coming to see things as they are, through your own eyes, instead of the tired eyes of some expert or other. It's about training yourself to trust yourself, and trusting yourself to train yourself, until you're able to claim your right as a human to be competent with your hands.

Finally no one is ever competent with his hands until he uses them, and flipping through how-to-it-books can hardly be described as manual labor. So perhaps the best way to recommend a book like this is to call it literature and emphasize its inspirational value. I kind of like that idea. I've thought the same thing about the *Whole Earth Catalog* in general, which brings up an interesting question: if the ultimate test of a good manual is its *success* as art, does that mean that the ultimate test of a good novel is its uses as a manual? We'll see. Meanwhile, here's a good 95 cent how-to-it-book that could be a help to you on your next trip, real or imagined, into the New Wilderness.

[Reviewed by Gurney Norman. Suggested by Jim Martin]

How to Live on Nothing

Joan Ransom Shortney  
1961; 336 pp.

\$0.95 postpaid

from:  
Pocket Books  
A Division of  
Simon & Schuster, Inc.  
630 Fifth Avenue,  
New York, N.Y. 10020

or WHOLE EARTH CATALOG

Champagne Living on a Beer Budget

If your vision of an alternate life style includes a dome in the mountains, raising your own food and making your own clothes from homespun wool, you probably ought to pass this book by. It will tell you somebody writes *Living On A Beer-Bum Budget*.

But if you are pioneering in or near a city, and if money passes through your hands with some regularity, if, that is, you consider yourself what I have come to think of as a "suburban guerrilla," then *Champagne Living On A Beer Budget* would be a handy tool to have around your camp.

[Someday, after I've lived in the suburbs long, I'd like to write an essay about my vision of the suburban guerrilla. He's a definite phenomenon. There's a sizeable population of them here in the San Francisco Bay area, men and women out to enjoy the advantages of town life without paying the customary penalties. Every suburban guerrilla probably has his own definition of himself, but my own sense of him is this: he has a job, but not a career. He likes the comforts, but doesn't want to go into debt for them. He makes distinctions between things that are good and things that are merely expensive. He says for yourself what he may dig the funky scene. Hippies, after all, are urban guerrillas. But hippies are kids mainly grooving on each other in special in-circles, and that isn't quite what I'm talking about. I'm talking about people who see the possibility of a rich and abundant adult life within the context of those same suburban communities generally condemned as such hopeless wastelands that 'real' life cannot be supported there. The suburban guerrilla I have in mind is one of the suburbs, as well as in them.

He challenges the assumption that the suburban context is hard, absolute, impenetrable, like plastic. To him, more like a piece of cheap cloth, full of holes to breathe through, and to wind in and out of, like a morning glory, or a pole bean. He borrows much of his point of view from the orientals. He realizes that life goes on in the suburbs just like every other place, even if most of the people there are too blind and deaf to see and hear it. The guerrilla lives by his wits, one day at a time. This makes him a thief and alive. He has a talent for cultivating the holes in his chesscloth. One hole might simply be the way the world is at six a.m. Another might be first-hand knowledge of all the footpaths in the neighborhood. He creates his freedom here and there now and then, and by diligence winds up with as much as any conscious man

A food and nutrition chapter would not be complete without mention of a food bargain that is unknown to most of us. It is MPF, the Multi-Purpose Food, developed at the California Institute of Technology and merchandised through the Meals for Millions Foundation Incorporated. [correction: 1800 Olympic, Santa Monica, CA]. This is a non-profit organization dedicated to relieving and preventing starvation and malnutrition throughout the world. Meals for Millions supplies MPF for 3 cents a meal to famine areas.

BLACKBOARD CHALK. Leftever ends of chalk will get meted as a shine when rubbed on. Also, store these ends with costume jewelry to keep it from tarnishing.

City dwellers can get many vegetables for the asking at less trouble than we have to wander among the weeds. The grocer nowadays has a perfect passion for washing greens and wrapping them in plastic. If you reach his place early in the morning when he's engaged in this vitamin-rich task, you may receive a gift of the discarded vitamin-rich outer leaves plus a stray carrot and some celery stalks. I've obtained bok choy from a grocer in a nearby town and I use the wooden boxes for full while I'm preparing the greens.

CORKS. A used cork should be kept near the kitchen sink in a jugger glass or eggcup so that it is handy for scouring cutlery, etc. Used with scouring powder, it is effective and saves wear and tear on your dishcloth.

ABOUT THE BOOKS ON THIS PAGE

ENVELOPES, either the ones addressed to you or the ones inclosed with wedding invitations, etc., should be re-used. Open addressed envelopes carefully. Turn them inside out and regule the seams.

Motor-driven equipment is an increasingly heavy expense as our homes become more mechanized. Most of us, however, pay for unnecessary appliance repairs through ignorance of how to avoid them. It's not necessary to try to rival the skill of a professional repairman. Simply keep them away by knowing a few rules of care and repair. Car engines aren't the only ones to suffer strain in cold weather. A hard start strains any motor. Your washing machines standing on the back porch in a temperature below 40 degrees F. must stand half a day inside in the warmth before you do the wash. If you keep your car in the garage, the radiator room, apply the same rule. Even the motor-driven grinder out in the unheated garage needs warming before turning. Vacuum cleaner, freezer, and refrigerator motors all need warming before starting.

anywhere. His landscape is small and patterned, but there are discoveries to be made on it, discoveries that can feed his own life at the same time they are important to the culture. I know of one elderly couple that subsists almost entirely on the food they raise in their organic garden in the backyard of their home in suburban Menlo Park. As far as I'm concerned, the trip those two people are on, as the life they are providing is itself, is the most inspiring radical activity in all of San Francisco's radical environs.

One needn't romanticize his life as much as all that, however, to find the book we're talking about a worthwhile manual. Anybody interested in bargains ought to have it. It's loaded with facts, tips and information on good deals in all the important categories. Food, clothing, shelter, real estate, automobiles, household appliances, medical things, taxation, funerals, recreation, retirement, consumer co-ops, travel, babies, insurance, charities, and more. It's entertainingly messy, yet the rhetoric never gets in the way of the information. The people who wrote it obviously want to beat the money rap as much as any of us. They also want to live well. Their book will be of considerable help to other people trying to do both, simultaneously.

[Reviewed by Gurney Norman]

Champagne Living on a Beer Budget  
Mike and Max Ferguson  
1968; 247 pp.

\$0.75 postpaid

from:  
G. P. Putnam's Sons  
200 Madison Avenue  
New York, N.Y. 10016

or WHOLE EARTH CATALOG

For a dollar a year, you can subscribe to Our Public Lands, a quarterly magazine telling how to buy public lands, where to hunt, fish, or camp; also details of "Alaskan opportunities." Order from the Superintendent of Documents, Washington, D. C. 20402.

Finally we called eight establishments under Typewriters, Rental. For comparable models of a Smith-Corona electric portable typewriter, companies wanted \$25 per month; two wanted \$22.50; three were asking \$20; one, \$15; one, \$12.50. We finally rented a nearly new machine from a firm that charged \$3 monthly on a two-month basis.

BREAKFAST WHEAT MEAL. With 2 cups (1 pound) wheat kernels. Spread on cookie sheet to dry and toast in moderate (350 degrees) oven for 1 1/2 hours. Put kernels through coffee grinder, adjusting to give you a very moist meal, coarser if you want grits or finer. Makes 3 cups. Store in cool place. To make 4 small or 2 large servings and add concentrated milk values, mix 1 cup wheat meal with 1 1/2 cups dry milk solids. Mix to paste in 1/2 cup cold water. Add to 1 1/2 cups boiling water with 1/2 teaspoon salt. Stir over low heat 3 minutes. When smooth and thick, add a teaspoon of honey or raisins or other dried fruit or optional sweetening and serve with butter or cream as your taste dictates.

DOORKNOB. If you have no pestle for pulverizing pills and crushing beads, mashing herbs, etc., use a doorknob in a wooden salad bowl.

If you live in the city you can usually get plenty of discarded crates for tinder, but unfortunately logs are expensive. News paper, however, is cheap. If you haven't enough of your own, collect your neighbors' or find the nearest trash can. To make a log out of paper, roll the newspaper from the bottom so that the length of the log will be no more than the width of the paper. Make a thick roll (a Sunday edition should do it) at least 6 inches in diameter. Then flatten the roll by rolling it on the diagonal of two sheets of fully spread-out newspaper and tucking each end of this covering piece into each end of the log roll. You'll not believe this until you try it—I didn't—but this is the way to make a log that will burn slowly and will stretch out a scant wood supply admirably. We use these in our fireplace when it is too damp to go out for wood.

"Overexposed steaks" are a find for those who will literally look beyond the surface of things. The fluorescent lighting used in grocery store meat shelves darkens the steaks quite rapidly. Once a steak turns maroon, it is usually no longer worth 25 percent or so—and it's fine. Some expensive canned fruits, like Elberta peaches and fine Bartlett pears, can be bought in cans of "chunks and pieces" for a fourth or less than you'd pay for canned halves.

Or, if you'd rather, the National Association of Housing Cooperatives, Inc., invites your query. Address: 465 Grand Street, New York City, N.Y. 10002. Latest information on new cooperatives should be available from the United Housing Foundation, same address; or from the Association for Middle Income Housing, 217 Park Row, New York; or the FHC Company, 322 Main, Stamford, Conn. (IFHC International, 1001 15th Street NW, Washington, D.C., is an affiliate of the FHC Company and helps develop housing cooperatives overseas.)

Homes in the paths of proposed freeways have usually been bought by the city or county and are on the annual lease basis until time for demolition. Friends of ours are renting a \$30,000 home for \$85 a month until the bulldozers claim it. They simply called the city switchboard and asked to talk to someone about renting city-owned homes.

Homes being rented are often not due for demolition for eight or ten years. They're brought up far in advance of need so there won't be last-minute snags or holdouts.

Avoid the cheap \$10-\$17 brake jobs advertised by some service stations and shops. At the price, the linings are most likely of inferior quality, and wheel cylinders won't be rebuilt.

When it comes to air travel you can avail yourself of bargains if you'll give major airlines and airlines the regions of the world you want to visit. Night—forges a two planes of champagne in first-class quarters. "You'll see a run-of-the-mill" ticket on a regional western carrier if you live in the eastern half of the country; travel to Europe in off-seasons. Fly a triangle, with a stop at an intermediate glamour city thrown in for a few dollars extra, travel a heavyweight, frequently scheduled commuter flight—good reservations and fly for half fare, on a standby basis, at least one airline—or register as a first-time airline rider on another and make a sound investment for \$25—buy a package which wraps up hotel, entertainment, and air fare.

To locate a Memorial society in your area, or for sequential information, write to:

Continental Association  
39 East Van Buren Street  
Chicago, IL 60605

For \$1, this nonprofit organization will send you a Manual of Simple Burial (64 pages).

For 25 cents, the Continental Association What They Are and How They Are Organized. The association will also be happy to inform you if any societies are newly active in your area.

Buying wholesale is a thing lots of people can do IF it is done about correctly. Wholesalers are interested in making a profit, as are retailers. Keep this in mind when approaching a wholesaler. Show him how he can make money by selling to you at wholesale (like, you'll go else where if he doesn't). Often, a courtesy discount is given to legitimate non-profit (that means recognized by the state and Federal tax men) organizations. Courtesy discounts are usually offered only by retail establishments. They sell you at the wholesale price and often make no money on the transaction.

Wholesalers are able to sell at lower markups and still make money by keeping down bookwork and unnecessary stock handling. That means they want to sell in quantity. So get your friends together and make up as big a list as possible. And be prepared to pay cash.

Don't expect dealer service from wholesalers. You haven't paid for it and if you ask for it, you probably won't ever be able to buy wholesale there again. Don't ask to examine everything. They can't afford to let you.

Some wholesalers will sell only to persons or firms having a resale tax license (State Board of Equalization in California). This usually requires posting a good sized bond (\$50 minimum) to assure that you will pay sales tax on everything you buy. These wholesalers don't want the bookwork involved in sales tax, so they sell nothing that they will have to charge tax on.

Often, after meeting all of the above basic requirements, you still can't buy wholesale from some sources. At this point a "front" letterhead helps. Better get a city business license or DBA (Doing Business As) and stay out of trouble. These are usually free or cheap.

Buying food wholesale is more difficult, because the markup is very low. Sometimes a store will give you a special price if you buy by the case. Or buy direct from the farmer at the same price you would pay in the store. Get fresher produce and let the grower have the profit. He needs it.

Most of all, remember to show the wholesaler that he will make a profit by selling to you. That's usually all you need.

—Fred Richardson

## Moneysworth

I don't like their hard sell, nor their thinness, but they do do as good original information on money-saving.

—SR

Moneysworth  
Ralph Ginsberg, ed.

\$10/yr (biweekly)

from:  
Moneysworth  
110 W. 40th St.  
New York, N.Y. 10016

...ROAD HOPE:  
You can rent a home cheaply—if you don't mind living dangerously. "Homes in the paths of proposed freeways have usually been bought by the city or county and are rented on an annual lease basis at low rates until time for demolition," say Mike and Marilyn Ferguson in their new paperback *Champagne Living on a Beer Budget* (F. Putnam's Sons, 75¢). "Friends of ours are renting a \$5,000 house for \$85 a month—until the bulldozers claim it. They simply called on the city neighborhood and asked for the real estate department. Some of these homes are not due for demolition for eight or ten

## The Penny Pincher's Guide

This is 50 cents worth of straight unchatty tips on beating the supermarket.

The Penny Pincher's Guide  
Ellen Hurst Durkin  
1971. 96 pp.

\$0.50 postpaid

from:  
Bantam Books, Inc.  
666 Fifth Ave.  
New York, N.Y. 10019

or WHOLE EARTH CATALOG



## Consumer Reports

Consumer Reports is a comfort. When the time comes to buy some goods—auto, television, or a hi-fi, or a sewing machine—CU (Consumer Union) is there with the information on what's the best, or the best buy, or the healthiest of the brands available. I.e. how not to get burned (one anticipates the CU research on brand-name psychodelics). Consumer Reports is a monthly magazine with articles on various classes of products and various cases of marketing misbehavior; the December issue is the *Buying Guide*—a dense compendium of all the quality/price information, available separately for \$2.65. I only wish the magazine would print ads, give the manufacturers a place to beef back, live up to the *Liberal Hour*.

—SR

## CONSUMER REPORTS

### Boys' Shoes

Side Flap  
Partial Working Machine  
Full All Purpose  
Cushion Sole  
Rubber Treads  
Rubber Soles

## Consumer Reports

\$8.00 per year (monthly) in U.S.

\$9.00 per year other countries

from:  
Consumer Union  
Mount Vernon, New York 10550

## Consumer Reports Buying Guide

\$2.65 postpaid

from:  
Consumer Union  
Mount Vernon, New York 10550



## CU'S KEY FINDINGS

CU tested Super 8 cameras equipped with zoom lenses, automatic exposure control and, by and large, through-the-lens viewing and metering. Four earned a check-rating—the Nizo S36, the Argus Cosina 708, the Honeywell Elmo Dual Filmatic 909 and the Eumig Viennette 3. Each of the check-rated models enjoyed some distinction in addition to high overall quality. The Nizo, light and compact, was particularly comfortable to work with; the Argus provided an outstandingly wide range of zoom settings; the Honeywell could, with an optional back, take Single 8 as well as Super 8 film; and the Eumig fixed-focus camera (a Best Buy) offered optical performance comparable to the best focusing models at all but the shortest distances. The Bolex Macrozoom models also proved interesting because they can focus at extremely short distances.

## CU'S KEY FINDINGS

You needn't spend a small fortune for a cartridge, or pickup, suitable for use with a high-quality stereo system. The best one we tested, the check-rated Shure V15 Type II (improved) lists at \$68 (but probably sells at closer to \$50). Yet not but a perfectionist could quarrel with such a pickup as the Shure M91C, which we were able to buy at half its \$50 list. And those planning a stereo system on a tight budget can buy the ADC 220XE, which should sell for under \$20, or the Shure M7N21D, which lists at \$18 but sells for a good deal less.

Cross-country, most food sales occur from Thursday to Saturday. If this is true in your area, plan to shop at the end of the week.

If you shop on Saturday, watch for reductions on foods the store doesn't want to keep over a weekend.

Shop when the selection of perishables is the freshest, usually in mid-morning.

Study the fine print on labels of processed food. Ingredients must be listed in descending order of quantity. This legal listing tells the true story, which product titles or handsome pictures may not. A main dish may be called "chicken with rice," but if the label lists rice before chicken, you know it's more accurately "rice with chicken."

Bananas may be refrigerated once they reach the brown-flecked stage of perfect ripeness. They will hold for several days, but do lose a bit of their lush flavor from refrigeration.

## Discount Suppliers

I am just now getting around to reading back issues of the W.E.C., and have come across the letters in the July 1970 issue about "dis-unity" (page 9). Having been ripped off by Unity Buying Service a couple of years ago I would like to submit the following in hope that others might be saved the pain and financial loss.

It should be obvious that this service is a rip off. I would discourage people from using it. There are a number of more reputable and cheaper outfits. One that I have dealt with in Rochester, New York is R. W. R. R. West. They operate several stores with the same type of catalogue/discount plan, without the membership or service charge. I'm not up on their mail order procedure.

I most strongly recommend another which I have come in contact with since moving to Tennessee. The name is Anderson's, 404 Steward Ave., Greenville, Tennessee, 37743. They have a catalogue very similar to U.B.S., and operate on the same discount procedure. There are, however, several big differences.

1. They charge no fee for membership
2. They have no handling charges. Only price + COD or postage.
3. Their prices appear to be lower. E.g., the Kodak B50 projector illustrated (pg.95 70 WEC) UBS—\$144.00 vs. Anderson's—\$137.55 + nothing! CAN YOU DO IT??

Anderson's belongs to a group of 35 such stores through the South-Mid West. I'm trying to get the names of the other members. One drawback is that they are very much into the Middle America/jewelry & silverplate stuff—but they have several items worth considering, especially if you are many miles from a big discount store. Also, the manager says that he will consider any requests for unlisted items (no guarantee that he can get them). They handle several limited items that they do not list, and they can get some stuff on special order.

I will personally be willing to follow up any complaints about poor service.

Harvey Williams  
Greenville, Tennessee

While I'm at it I'd like to introduce you to another friend—Jung Seed Co., Randolph, Wisconsin, 53956. They have an extremely wide variety of vegetable and flower seeds at very reasonable prices—usually 20 or 25 cents per packet. They also have prices for larger quantities (1/2oz. or by pound etc.) and they handle fruit and ornamental trees. Only 35 cents handling charge on orders under \$10, and they pay shipping on all orders (with very few exceptions—parcel post or freight charges not paid to Far West). They are very fast and cooperative. They even sent me seeds when I was in Panama and paid the Air Mail postage themselves. Not organic as far as I know.

Note their prices for fruit trees, grapes and berries are as much as 1/2 as much as Stark Bros.

## Consumer Bulletin

Over the years we've found that a less well-known magazine than *Consumer Reports* called *Consumer Bulletin* has a more ecological approach. It is published by *Consumers' Research, Inc.*, Washington, N.J. 07882, boasts of being the original consumer magazine, and costs \$5.00 including an annual subscription.

Audrey Newcomb  
Rochester, N.Y.



One time when Boone learned his gun against the mailbox he found a letter in it from John L. Lewis that said DON'T COME TO KENTUCKY, BOYS, THE WORK'S TOO HARD AND THERE'S TOO DAMN LITTLE PAY. Another time when Boone was a letter to Daniel from his brother Squire that said, "If you see a boy named David Ray Collier out in them woods, you send him home, he's too young to roam."

David said, "There was not."  
"Oh yes there was too," said his father.  
His father's name was Royce. Royce Collier. And in those days, before his mother's second marriage to Wallace Davenport, Collier was David Ray's last name too.

"Oh yes," said Royce. "Squire sent that letter to Daniel Boone." So they both knew and saw it for sure.  
Doyle, the assistant driver and chief mechanic for the old Pontiac, once twenty-four, then tall and lean, fresh out of the army, sitting in the front seat beside Marcella, would nod and say that it was so, and that if David didn't believe it he could just ask Royce there. And around and around it would go, two men supporting each other's teasing lie, and sometimes it was funny and Doyle would laugh, and sometimes they would tease too far and hurt David's feelings, and then he would sit back into the crowd of cosses in the back seat and pout the rest of the way to the homeplace.

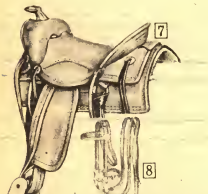




Soft SEROFOAM  
for relaxing comfort

Quite firm enough to keep its shape and give long service but more yielding to the figure than denser foam. Density weight, 1.25 to 1.45 lbs. per cubic foot.

Thickness	Width	Catalog Number	Ship. wt., lb.		Price per
			lbs.	oz.	sq. yd.
1 in.	18 in.	24 A 8892P		6	38¢
2 in.	18 in.	24 A 8806P		12	66¢
2 in.	36 in.	24 A 8812CP	1	8	\$1.37
2 in.	54 in.	24 A 8813CP	2	4	1.95
3 in.	18 in.	24 A 8794P	1	2	99¢
3 in.	36 in.	24 A 8795CP	2		2.99
3 in.	54 in.	24 A 8796CP	3		1.44
4 in.	18 in.	24 A 8797P	1	8	2.85
4 in.	36 in.	24 A 8800P	3	8	2.85
4 in.	54 in.	24 A 8798CP	4		3.95



The Peerless S  
\$8450

- 7 Neat and smooth except for the beautifully embossed borders. A hard working saddle with *full double rigging*, brass-plated hardware and deep 3-inch beaded roll cantle. Skirts, 12x23 inches long. Fork, 12 inches wide. Wood stirrups with leather tread. Russet tan color.
- Shipping weight 25 pounds.
- 32 KF 50101L.....\$84.50
- 8 **Matching Bridle.** With bit and 6-foot reins. Nickel-plated hardware.
- 32 KF 52005—Shipping weight 1 lb. 12 oz.....\$8.25

**Heavy-duty wheelbarrows . . .  
sturdily built to "take a beating"**

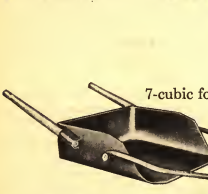
**37<sup>5</sup>**  $5\frac{1}{2}$  cu. ft.      **32<sup>9</sup>**  $4\frac{1}{2}$  cu. ft.

52½-cv. ft. capacity contractors' model handles all heating chores. One-piece bottom tray of heavy-gauge sheet steel is leakproof, holds liquids as well as solids. Heavy-duty steel rollers. Rolled edges. Channel steel undercarriage (see picture) and legs for extra support. Wheel guard allows easy dumping. Hardwood handle, 16-in. diam. ball bearing wheels 8x4.00 tube tire.

99 FR 1118R—Ship. wt. 70 lbs.....cash 37.95

4½-cv. ft. capacity contractors' model. Has all the line features as 52½-cv. ft. model above but with recessed bolts in tray and with wood risers.

99 FR 1117R—Ship. wt. 65 lbs.....cash 32.49



7-cubic foot Drag Scoop  
\$64<sup>95</sup>

Pull with Jeep® vehicle, tractor or horse. Bowl formed with solid plate of thick 10-gauge high-carbon steel. Alloy-steel cutting edge welded to bowl for strength. Steel runners reinforce bowl, keep scraper in alignment. Steel bail with heavy swivel lugs, hook-up link. Steel socket welded to bowl. Hardwood handles. 33x31x10 in. *See Shipping Note at right.*

F32 KF 7860N—Shipping weight 102 pounds.....	\$64.95
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## Pitcher-spout Hand Pump \$1050

Cast-iron. Full-swing handle. Anti-freezing . . . water returns to well when handle is raised. 3-in. cylinder. For 20-ft. lift. 17 in. high. 1 1/4-in. suction.	
42 KF 2746C—Shipping weight 19 pounds . . .	\$10.50
Cup Leather for Pither Pump. (Not shown.) Oak-tanned. Use with 20- Lower Valve Leather (below). 3-in. cylinder, 2-in. outside diameter.	
42 KF 2313S—Shipping weight 1 ounce . . .	59
Lower Valve Leather. (Not shown.) For hand pumps and 3-inch- cylinders. 3 1/4-inch outer diameter.	
42 KF 2316S—Shipping weight 2 ounces . . .	49



Competition Carburetors  
**\$38<sup>99</sup>**

**Carter "Dune Buggy Duce" Carburetors for Volkswagens.** Two-barrel conversion with electric choke. For 6 or 12-volt VW engines. Mounts on manifold in Ram-induction Power Kit on facing plate. For street or strip.

KR 4480—Shpg. wt. 9 lbs. .... \$38.99

**Holley Hi-Performance "Bug Spray" Carburetors for Volkswagens.** Two-vent configuration for increased power. All 12-volt VW engines. For 6-volt engines order conversion kit below. Mounts manifold from Ram-inductions Power Kit on facing plate. For street or strip.

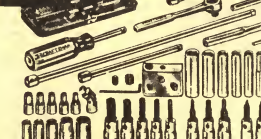
KR 4481—Shipping wt. 9 lbs. .... \$36.99

**Holley Choke Conversion Kit.** Replaces 12-volt choke with 6-volt for older "S. Bakelite" shell construction.

KR 4482—Shpg. wt. 8 oz. .... \$5.99



## Franchise Sets



**CRAFTSMAN® 48-piece Socket Wrench Set**

3/4-inch square drive. Ten 6-pt. sockets (5/16 to 3/4 inch), nine 6-pt. deep sockets (1/16 to 3/4 inch), fine tooth quick release reversible ratchet, hex handle, crossbar, slide bar handle, 4-inch extension handle, 4-inch flex extension, three extensions (3, 6, and 8-inch), 3/4-inch setscrew wrench.

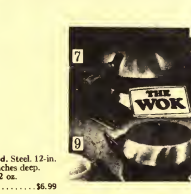
Shipping weight 5 pounds 2 ounces.  
 AT 44392 Set \$39.99



**Rope hoists with double sheaves, drop-forged hooks**

**10** Self-locking rope hoists will not slip. 4-to-1 mechanical advantage does most of the work. Requires 4 feet of rope to lift an object 1 foot. Reinforced steel construction. Drop-forged hooks at top and bottom for maximum strength. Roller bearings. Incl. 50 ft. of rope. State size no.

Moist with 30-ft. rope					
Rope size	Safe load	Size no.	Catalog number	Ship. wt.	Each
3/8 in.	250 lbs.	01	Z84FR9713 M	7 lbs.	5.79
1/2 in.	500 lbs.	02		11 lbs.	8.99



7 3-pc. professional-type V  
The essential pan for prepa  
most Oriental dishes. High qua  
weight steel for even heating. 1  
vegetable pan, 12-in. diam. hr  
for meats, also serves as vege  
cover. Natural pine wood han  
bamboo whisk for cleaning, se  
stirring chopsticks incl. Revers  
ring of nickel-plated steel lets  
on electric or gas stove. Use W  
preparation, baking, frying, st  
large quantities. Recipes incl.  
11 A 9271—Shpg. wt. 8 lbs. 8 oz.



**CRAFTSMAN® Pocket Knives unconditionally guaranteed\***

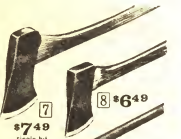
(26 thru 35) Unless stated otherwise, all these knives have high-carbon cutlery steel blades which keep their sharp edge for a long, long time . . . brass-lined unbreakable handles . . . nickel-alloy bolsters. (26), (29), and (30) have DuPont Delrin® plastic handles, milled for firm grip. Length shown is with knife closed.

- 26 American Eagles Best Bad** Hand crafted, 61 finishes and gold-plated. 1/2" x 1 1/2" x 1 1/2".  
Eagle shield, 3 blades (long clip, sharp, 1/2" x 1 1/2" x 1 1/2").  
Has its own serial number. \$8.95
- 27 Saw Knife, Saw blade** has thumb rest for fast, sure cutting—a CHAINSAW equivalent. Area reinforced with 1/2" x 1 1/2" x 1 1/2" and springs. nickel-plated handle. 1/2" x 1 1/2" x 1 1/2".  
Can opener, punch combination screwdriver, 1/2" x 1 1/2" x 1 1/2". Leather sheath. Gift boxed.
- 28 5/8" Slim Jim, 2 blades** (open and closed). \$7.95
- 29 5/8" Slim Jim, 2 blades** (open and closed). \$7.95
- 30 4 blades** (archaic lance blades) to cut paper clips, pens, file, screwdriver, 1/2" x 1 1/2" x 1 1/2".  
2 1/2" in. long. Carrying pouch. \$6.95
- 31 Old Crow, 3 blades** (open and closed, sharp, 1/2" x 1 1/2" x 1 1/2").  
1/2" x 1 1/2" x 1 1/2". \$6.95
- 32 "UNCONDITIONAL GUARANTEE"** If any knife listed on this page fails to give complete satisfaction, return it and it will be replaced absolutely free of charge.
- 33 Stockmen's 3 blades** (rust-resistant, open and closed, sharp, 1/2" x 1 1/2" x 1 1/2").  
1/2" x 1 1/2" x 1 1/2". \$9.95
- 34 5/8" Shipping weight** 5 oz. \$5.95
- 35 Stockmen's 3 blades** (long clip, sharp, 1/2" x 1 1/2" x 1 1/2").  
1/2" x 1 1/2" x 1 1/2". \$9.95
- 36 5/8" Shipping weight** 5 oz. \$13.95
- 37 Cowper's 4 blades** (open, punch, screwdriver, 1/2" x 1 1/2" x 1 1/2").  
1/2" x 1 1/2" x 1 1/2". \$9.95
- 38 5/8" Shipping weight** 5 oz. \$13.95
- 39 Combination screwdriver** (open and closed, sharp, 1/2" x 1 1/2" x 1 1/2").  
1/2" x 1 1/2" x 1 1/2". \$9.95
- 40 5/8" Shipping weight** 5 oz. \$13.95
- 41 5/8" Shipping weight** 5 oz. \$13.95
- 42 Slim Jim, 2 blades** (open and closed, sharp, 1/2" x 1 1/2" x 1 1/2").  
1/2" x 1 1/2" x 1 1/2". \$9.95
- 43 5/8" Shipping weight** 5 oz. \$13.95
- 44 5/8" Shipping weight** 5 oz. \$13.95
- 45 Berrow, Old favorite, especially with boys** 2 blades (open and closed, sharp, 1/2" x 1 1/2" x 1 1/2").  
1/2" x 1 1/2" x 1 1/2". \$9.95
- 46 5/8" Shipping weight** 5 ounces.
- 47 5/8" Shipping weight** 5 oz. \$13.95

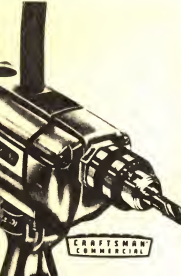
**\*UNCONDITIONAL GUARANTEE:** If any knife listed on this page fails to give complete satisfaction, return it and it will be replaced absolutely free of charge.

### Forged Steel Axes

- Our best CRAFTSMAN Axes. Tempered and hardened. 3 1/2-lb. tool steel heads. Enamel finish, 36-inch hickory handles. \$4.99. **Wedgecock** Shipping wt. 6 lbs. 99 **AT 50371C**—Single bit. **\$7.49** 99 **AT 50411C**—Double bit. **8.49**
- 8 CRAFTSMAN Axes.** Forged 2 1/2-lb. chromium steel head. Heat treated. \$4.99. **Wedgecock** Shipping wt. 4 lbs. **\$6.49**
- Economy Axe** (not shown). Single bit 3 1/2-pound head, 36-inch handle. **\$4.99** 99 **AT 50252C**—Shpg. wt. 4 lbs. **\$6.49**
- 9 Woodchoppers' Maul.** High carbon steel; polished edge. 8 lbs. 99 **AT 50732C**—Shpg. wt. 10 lbs. **\$9.99**
- 10 Carbon-steel Wedge.** 9 in. long. Hand forged. For log splitting. **\$6.99** 99 **AT 50733C**—Shpg. wt. 10 lbs. **\$9.99**



1940-1941, 1942-1943, 1944-1945, 1946-1947, 1948-1949, 1950-1951, 1952-1953, 1954-1955, 1956-1957, 1958-1959, 1960-1961, 1962-1963, 1964-1965, 1966-1967, 1968-1969, 1970-1971, 1972-1973, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, 2002-2003, 2004-2005, 2006-2007, 2008-2009, 2010-2011, 2012-2013, 2014-2015, 2016-2017, 2018-2019, 2020-2021, 2022-2023, 2024-2025, 2026-2027, 2028-2029, 2030-2031, 2032-2033, 2034-2035, 2036-2037, 2038-2039, 2040-2041, 2042-2043, 2044-2045, 2046-2047, 2048-2049, 2050-2051, 2052-2053, 2054-2055, 2056-2057, 2058-2059, 2060-2061, 2062-2063, 2064-2065, 2066-2067, 2068-2069, 2070-2071, 2072-2073, 2074-2075, 2076-2077, 2078-2079, 2080-2081, 2082-2083, 2084-2085, 2086-2087, 2088-2089, 2090-2091, 2092-2093, 2094-2095, 2096-2097, 2098-2099, 2100-2101, 2102-2103, 2104-2105, 2106-2107, 2108-2109, 2110-2111, 2112-2113, 2114-2115, 2116-2117, 2118-2119, 2120-2121, 2122-2123, 2124-2125, 2126-2127, 2128-2129, 2130-2131, 2132-2133, 2134-2135, 2136-2137, 2138-2139, 2140-2141, 2142-2143, 2144-2145, 2146-2147, 2148-2149, 2150-2151, 2152-2153, 2154-2155, 2156-2157, 2158-2159, 2160-2161, 2162-2163, 2164-2165, 2166-2167, 2168-2169, 2170-2171, 2172-2173, 2174-2175, 2176-2177, 2178-2179, 2180-2181, 2182-2183, 2184-2185, 2186-2187, 2188-2189, 2190-2191, 2192-2193, 2194-2195, 2196-2197, 2198-2199, 2200-2201, 2202-2203, 2204-2205, 2206-2207, 2208-2209, 2210-2211, 2212-2213, 2214-2215, 2216-2217, 2218-2219, 2220-2221, 2222-2223, 2224-2225, 2226-2227, 2228-2229, 2230-2231, 2232-2233, 2234-2235, 2236-2237, 2238-2239, 2240-2241, 2242-2243, 2244-2245, 2246-2247, 2248-2249, 2250-2251, 2252-2253, 2254-2255, 2256-2257, 2258-2259, 2260-2261, 2262-2263, 2264-2265, 2266-2267, 2268-2269, 2270-2271, 2272-2273, 2274-2275, 2276-2277, 2278-2279, 2280-2281, 2282-2283, 2284-2285, 2286-2287, 2288-2289, 2290-2291, 2292-2293, 2294-2295, 2296-2297, 2298-2299, 2300-2301, 2302-2303, 2304-2305, 2306-2307, 2308-2309, 2310-2311, 2312-2313, 2314-2315, 2316-2317, 2318-2319, 2320-2321, 2322-2323, 2324-2325, 2326-2327, 2328-2329, 2330-2331, 2332-2333, 2334-2335, 2336-2337, 2338-2339, 2340-2341, 2342-2343, 2344-2345, 2346-2347, 2348-2349, 2350-2351, 2352-2353, 2354-2355, 2356-2357, 2358-2359, 2360-2361, 2362-2363, 2364-2365, 2366-2367, 2368-2369, 2370-2371, 2372-2373, 2374-2375, 2376-2377, 2378-2379, 2380-2381, 2382-2383, 2384-2385, 2386-2387, 2388-2389, 2390-2391, 2392-2393, 2394-2395, 2396-2397, 2398-2399, 2400-2401, 2402-2403, 2404-2405, 2406-2407, 2408-2409, 2410-2411, 2412-2413, 2414-2415, 2416-2417, 2418-2419, 2420-2421, 2422-2423, 2424-2425, 2426-2427, 2428-2429, 2430-2431, 2432-2433, 2434-2435, 2436-2437, 2438-2439, 2440-2441, 2442-2443, 2444-2445, 2446-2447, 2448-2449, 2450-2451, 2452-2453, 2454-2455, 2456-2457, 2458-2459, 2460-2461, 2462-2463, 2464-2465, 2466-2467, 2468-2469, 2470-2471, 2472-2473, 2474-2475, 2476-2477, 2478-2479, 2480-2481, 2482-2483, 2484-2485, 2486-2487, 2488-2489, 2490-2491, 2492-2493, 2494-2495, 2496-2497, 2498-2499, 2500-2501, 2502-2503, 2504-2505, 2506-2507, 2508-2509, 2510-2511, 2512-2513, 2514-2515, 2516-2517, 2518-2519, 2520-2521, 2522-2523, 2524-2525, 2526-2527, 2528-2529, 2530-2531, 2532-2533, 2534-2535, 2536-2537, 2538-2539, 2540-2541, 2542-2543, 2544-2545, 2546-2547, 2548-2549, 2550-2551, 2552-2553, 2554-2555, 2556-2557, 2558-2559, 2560-2561, 2562-2563, 2564-2565, 2566-2567, 2568-2569, 2570-2571, 2572-2573, 2574-2575, 2576-2577, 2578-2579, 2580-2581, 2582-2583, 2584-2585, 2586-2587, 2588-2589, 2590-2591, 2592-2593, 2594-2595, 2596-2597, 2598-2599, 2600-2601, 2602-2603, 2604-2605, 2606-2607, 2608-2609, 2610-2611, 2612-2613, 2614-2615, 2616-2617, 2618-2619, 2620-2621, 2622-2623, 2624-2625, 2626-2627, 2628-2629, 2630-2631, 2632-2633, 2634-2635, 2636-2637, 2638-2639, 2640-2641, 2642-2643, 2644-2645, 2646-2647, 2648-2649, 2650-2651, 2652-2653, 2654-2655, 2656-2657, 2658-2659, 2660-2661, 2662-2663, 2664-2665, 2666-2667, 2668-2669, 2670-2671, 2672-2673, 2674-2675, 2676-2677, 2678-2679, 2680-2681, 2682-2683, 26



Extra  
Heavy-duty  
½-inch Drill  
\$ 4.99

Motor develops 34 HP...100% ball and needle bearings. Especially well suited for continuous-duty glazing and drilling in steel and concrete. Non-slip, diamond tread top handle. Removable for working case in tight places. Has a no-load speed of 600 rpm. Measures 13 inches long. Heavy-duty double-pole switch lock for continuous running. Operates on 110-120-volt, 25-60-cycle AC-DC. 8-foot length of cord. Reversing feature makes it easy to drive and remove. 1/2" opening—speed-reducer kit # 9AT 25553 on facing page. 1/2" opening—speed-reducer kit # 9AT 25569, runner, tapper, etc. See *Note below*. Left for details. **features: CRAFTSMAN Commercial story on page 18.**  
# 9AT 778—Shipping weight 9 lbs. 10 oz. ... \$24.99





## The Armchair Shopper's Guide

This cheerful book is an uncommonly practical compendium of access. Listed here are all of the major and many of the minor mail order shippers in the world. To a large extent the shippers carry items not available locally. Each source is very well described and compared with its competitors. The Armchair Shopper's Guide is more general than us, and geared to weather readers, but if you use the **WHOLE EARTH CATALOG** very much, you can almost certainly use the Shopper's Guide.

—SB

## The Armchair Shopper's Guide

Delphine G. Lyons  
1986, 218 pp.  
\$1.50 postpaid

from:  
Essandess Special Editions  
Simon and Schuster, Inc.  
360 Fifth Avenue  
New York, New York 10020  
or **WHOLE EARTH CATALOG**



You'll have to pay the sales tax if the mail order house is located in your own state or municipality, but you aren't required to pay it to firms in other states, nor may they charge you their local sales taxes. Although this has always held true for most mail order houses, in the past such big firms as Sears, Roebuck and Co. made a practice of collecting the various local sales taxes from their customers and passing them on to the state or city involved. However, a recent court ruling has declared this illegal. So if you live in a place such as New York City you can save a pretty penny (5 per cent) by buying by mail from out-of-state firms.

Katherine Smith, P. O. Box 121, Fort Worth, Texas 76101 (catalog 50 cents) offers new recordings made by old-time country and western singers, in partnership with the Bluebonnet Recording Co. In addition, she issues lists of old 78's for collectors.

Sunsey Yarn House, 349 Grand Street, New York, New York 10002 (catalog free; yarn samples 50 cents) offers an enormous selection of discount yarns and knitting supplies, as well as some art needlework.

Australian Gem Trading Company, 294 Little Collins Street, Melbourne C1, AUSTRALIA (catalog free); rough-cutting opal is available here at \$1 per ounce for the lowest quality, going up to \$60 and over for the more valuable types. Cut and polished stones and opal doublers are also available. In addition, there's Australian sapphire (both blue and black star), rough and polished.

The Putney Nursery, Putney, Vermont 05346 (catalog free) sells wild flowers by mail—not the wild flowers that have become associated as regular garden plants, but such blossoms as harebells, trillium, wild ginger, and the like.

Katagiri & Company, Inc., 224 East 50th Street, New York, New York 10022 (catalog free). This well-known Japanese grocery has everything for the Japanese cuisine—dried bean curd, dried seaweed, pickled ginger, candied baby abalones and baby octopus (an 8-oz. can is 75 cents) and so on. Confections include bean jelly (16-oz. for 70 cents) and seaweed candy (6-oz. for 30 cents).

## Gohn Brothers

Gohn Brothers supplies chiefly the stricter Mennonite orders and the various orders of the Amish Mennonite people all over the country. Since the Amish have managed communal living successfully for about 250 years, I figure at least some of their practices must be valid. Their clothing in particular is comfortable, durable and of low price. I can recommend from experience their broadfall work pants (no fly; broad button flap like bedsheet in front), overshirts (plain jacket with two roomy pockets on the inside) and overcoats (Heavy Dark wool, with cape). Many hard to find practical items listed, as well as a broad selection of rather plain yard goods. Service is fast and courteous. Once on their mailing list you get about four to six catalogs a year.

[Suggested and Reviewed by Peter R. Hoover]

Catalog  
free  
from:  
Gohn Brothers  
Middletown, Indiana 46540

## MEN'S BROADFALL WORK PANTS

No. 1190 10-oz. Sanf. Blue Denim.....\$4.49 pr.  
No. 44 9-oz. Sanf. Grey Covert.....\$4.49 pr.  
No. 55 9-oz. Sanf. Blue Saddle Denim.....\$4.49 pr.  
No. 66 9-oz. Sanf. Grey Saddle Denim.....\$4.49 pr.

No. 66 and No. 55 are solid colors. No white in it. Dresser than regular denim but make excellent work pants. Size 28, 29, 33, 43 only waist sizes left in grey covert. Also covert only available with all pockets and buttons.

## MEN'S WORK SUSPENDERS

Black, 1 1/2" wide, plain Amish.....\$1.49 pr.  
Black, 1 1/2" wide, Leather tabs.....\$1.49 pr.

BE SURE TO SPECIFY IF YOU WANT PLAIN OR TABS

## Vermont Country Store

More use and less frill than other nostalgic stores. Reasonable prices, good service.

—SB

Catalog  
free

from:  
Vermont Country Store  
Weston, VT. 05161

## Pot Chain

The kind grandma used, heavy steel, never wears out. For securing any cleaning iron pans and dishes. 3 1/2 by 9 inches. No. 11568 \$1.50\*. Ship. wt., 1/2 lb.



## Farmer's Bundle of Leather

This 1/2 lb. bundle of leather strips (some 3/4" wide), thongs, ties and odd size leather pieces will meet many a need around the place. Tanned, saddle color. No. 11681 \$1.25\* each. Ship. Weight 1/2 lb.



## You Can Now Make Your Own Antique Style, Scented Candles With Our Kit

You'll have fun with this kit, and what a fine gift too! With this easy-to-use kit, anyone can quickly make SIX ten-inch antique style early American candles, and later use the antique style pewter color mold for decoration. Kit consists of the 11" tall mold with six tubes and handle, and with two 7" long blocks of wax, red and green coloring, bayberry and pine scent, and braided wicking for the six candles. Full directions, 4 simple steps. No. 11541 \$15.00 set. Weight 5 lbs.

SPARK PANTS. The pewter color Metal Candle Mold for 6 candles. No. 11542 \$15.50. Weight 2 lbs.

Basic Supply Set has two big blocks of wax, two coloring cubes, bayberry and pine fragrances, and enough wicking to make SIX more candles. No. 11543 \$2.50 set. Weight 3 lbs.

Braided Candle Wicking. Enough wicking to make 24 candles. No. 11544 50c\*.

(22)\* Min. Ship. \$2. worth of goods. Post. p.



## Factory Stores

The factory store is one of the first places to go if you want to get certain merchandise cheap. This guide lists direct-from-the-manufacturer outlets for clothing and other personal and household items, but there are many other manufactured goods to be sought out in the same way.

This guide is only regional, but it's listed here to stimulate bargain hunters in other parts of the country as well as readers who live in the New England area. Why couldn't someone go out and compile the same sort of valuable information for whatever area they lived in, and make it available through the community media serving the people there? You probably have enough friends, each with his own favorite source of inexpensive goods, that you'd be able to start your research with lots of good leads.

—Hal Hershey

## Factory Stores of Western New England

A. Mader & A. Penny-pincher

from:  
Pequot Press, Inc.  
Essex, Connecticut 06426

\$1.95 postpaid

Guided Fabrics

THE MILL STORE

Dorr Woolen Company

Routes 11 and 103

(Store also in Old Sturbridge Village, Sturbridge, Mass.)

Monday-Saturday, 9-5.

This is one of the most extensive and attractive fabric mill stores to be visited. Only fabrics loomed by the Dorris Woolen Company are sold here; these are available at savings of 40%. The wide selection includes solids, checks, tweeds, and Scottish plaids in both bonded and unbonded fabrics. Dress, suit, coat, and skirt weight wools are offered, either from the bolt or by the piece. Braided and hooking wools are also available, as well as rug patterns and supplies. An infinite variety of shades is available for that "just-right" hooking design. Pieces suitable for braiding start at 50¢ per pound.

## Trimcomb

The barbershop has been obsolete for several years. Now trimmers and hair cutters follow. This absurdly simple item uses a double-edged razor blade (one edge trims, the other dry-shaves) to sculpt your hair with simple amateur dabs at your head. It works better if your hair is wet. Trimcomb costs about \$3 at most drug stores.

—SB

[Suggested by Dave Evans]



## 60% WOOL BLANKETLINED OVERSHIRTS

Size 32 to 44 chest measure. Hooks and eyes. No outside pockets. Sewn with black thread. Cut with roomy armholes and wide sleeves.

10-oz. Sanf. Blue Denim.....\$7.39  
9-oz. Sanf. Grey Covert.....\$7.39

AMISH OVERCOATS.....\$6.95

With Cape.....\$6.95

100% navy blue melton. Made in single or double breasted style. Send for samples. Complete instructions on how to measure are furnished on request.

No. 400 SHEEPSKIN VESTS.....\$5.95 ea.

Zipper front. 2 patch pockets. Sizes, small, med., large, and extra large.

## Kalsø Earth Shoe

Have you heard about the Earth Shoe? The enclosed will tell most of it. Ray Jacobs is doing the Earth Shoe thing here, working hard to improve it and make it cost less from the price on the domestically made women's shoe. Jacobs found out about the shoe when touring in Europe and looking for relief for his wife's backache (yes). She had flat feet (no arch) and was pretty uncomfortable, I guess, but these funny shoes relieved the backache after a few weeks and now she has the arch where before. . . . Anyway, it's one of those things that seems to draw testimonials like flies. The shoes are strange to look at and stranger to wear; they hurt for the first few days but then they're dynamic.

[Suggested and reviewed by Ron Williams]

Definitely worth a mention. The steps of the wooden sandals are not so well made as the beautiful, polished bottoms, but the Kalsø people say they're working on a new version. The oxyfords are the best pair of shoes I've ever worn, expensive (I don't love hiking boots) they. If you send a drawing of your foot w/your order they try to match it up with a shoe. Expensive but you don't need more than one really good pair of shoes anyway.

-Terry Gunesch

Kalsø of Copenhagen  
117 East 17th St.  
New York, N.Y. 10003

## The Left Hand

A limited but useful line of left-handed stuff. Also check Anything Left Handed Limited, 65 Beak St., London W1, England.

-SB

The Left Hand  
145 East 27th St.  
New York, N.Y. 10016



## PORTABLE MICROFICHE READER

weighs 7½ lbs.

Product: Model PMR/50 for libraries, schools, hospitals and government operations. Features: Provides clear, 8½"x11" images at a finger's touch, maker records. Measures 13"x13"x7½". Accompanying desk-top file of 4"x6" microfiche stores 10,000 pages of information. Priced at \$89.50.

circle 233 for more facts from:

DASA Corp.  
Andover, Mass.

## Cheap Glasses

Some people have eye defects or disease that require prescription glasses; they should see a doctor. Most of us just get far-sighted as our muscles age, and all we need is simple magnification with a shorter focus. Certain states seem to discourage stores from stocking standard lenses in inexpensive frames on open counters. Perhaps there's an optometrist's conspiracy. But normal eye needs are no more various or peculiar than foot needs. There are standard shoe, shirt, and shorts sizes—why not standard lenses? With TV tube distortion, wrap-around windshields, and tinted sunglasses, nobody sees the real world much any more anyway. My nearsighted kid's eye examination, lenses, and frames cost \$35. My own Nu-Life specs (I am farsighted and getting along) cost \$3.95. Been wearing 'em 3 years, changed them once, satisfied & I can't see any difference. Avoid plastic hinges. Outright, intosight. Great gift for oldies who haven't seen the light.

[Suggested and reviewed by Tom Wertenbaker]

Catalog  
free from:  
NuLife Products  
Cus Cob, Connecticut

These glasses are just perfect for reading fine print and doing close work, for people over 40 who do not have astigmatism or eye disease and need the help of simple magnifying glasses. Doctors term these glasses completely safe and a highly effective aid to the natural aging of the eyes which affects the vision of most men and women after the age of 40.

Be sure to give ages when ordering one of the Full Frame Magnifying Reading Glasses below as we send stronger lenses to older people.

Full-Frame  
style #U  
Only \$3.95



Full-Frame style #U—Only \$3.95 is a universal two-tone style with distinguished dark brown and clear lower frame. Lenses are ground to the highest degree of precision. Fits both men and women. You'd expect to pay several times the price just for the attractive frames alone.



Style No. 1004  
LEATHER WALKING SHOE—Hand-made of top quality suede.  
Thick rubber sole. Available in tan and most green.  
Women's sizes—5-10 Price: Women—\$32.00  
Men's sizes—6-13 Men \$35.00

## Government Product-News

This is a goofy array of new products ranging from police equipment to seam slant that can be applied to a wet or oily surface without cleaning it first (and whod dee doo if that one works!) A subscription would be useful to a buyer for a school system or the like, but would be of limited value to a commune. It's one of those things that new products fear and designers like to read once a month but isn't really worth the price of the subscription to typical private citizen. Read it at your local business library.

I dig it.

[Reviewed by Jay Baldwin.  
Suggested by J. Cline]

Government Product-News from:  
\$6.00 /yr (monthly) Government Product-News  
731 Hennepin Avenue  
Minneapolis, Minnesota 55403

INSTANT  
WAREHOUSE \$895  
FOB Elkhart



Get weather-proof storage capacity for your inventory, materials, tools and equipment at only \$4.06 a sq. ft. — a cost far below conventional buildings. Fully assembled and ready for immediate use, sturdy Storage Wagons feature all steel structure, enameled steel exterior, painted interior with smooth board sidewalls; skylite and 110 volt prewired interior lights. Interior size 24'x8'x8' high locking door and step, 37" floor height on wheels. Easily relocated. Buy direct and save! Call or write for details. WELLS CARGO, INC. 1503 W. McLaughlin St., Elkhart, Indiana 46512/10/264-3141 • P.O. Box 1318 • Waycross, Georgia 31501 (912) 285-8122.

## Thongs

Beach Walk Sandals are not so special but they are the only zoris around that last for two to four months of all-day outdoor wear and don't collapse after a few days and leave you fearfully on your heels. Cost about a buck. Buy them in Shoe Stores and Repair Shops.

Peter  
Zen Mountain Center  
Carmel Valley, CA



BEACH WALK  
SANDAL

## Notice All Personnel

It is recommended that your headquarters screen the several hundred thousand Department of Defense field manuals, technical manuals, pamphlets, and other publications for possible inclusion in your catalog.

Thank you.

Joel Graber  
Captain, US Army  
APO San Francisco

## Retread Your Feet

Tried and true hiking boots are a pleasure to have, and a sadness to lose. Shoe repairmen are not only expensive but their repairs often don't last very long. Here are two ways in which I've prolonged the life of my boots; they may be useful to some of you.

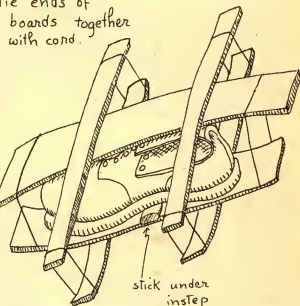
1) Sales from auto or truck tires

The soles on my boots were smooth and still firmly attached—just thin. If you have lug soles (treads, etc.) you'll have to modify this technique. If the old soles are coming off, you'll either have to take them off entirely or glue them down securely.

First, get a discarded tire. There are lots of them along back roads. I used a new tire (blown out) with a heavy duty tread. Cut out a section slightly longer than your boot and then cut off the side walls. Long-handled pruning shears work fine for cutting tires. Next, pry the heel off your boot and thoroughly work over the bottom of the boot and the inside of the tire with a stiff wire brush (the first key to success). Coat the two surfaces with a thermosetting resin (like epoxy) and clamp together securely (the second key to success).

Here's how I clamped mine—

the ends of  
boards together  
with cord.



Let it dry for about 24 hours, and then trim the tire to the shape of the boot. I wasn't too fussy about looks; if you don't like the sole sticking out from there, you'll need to finish the job with a wire grinding wheel. I left the heel off and have found that it didn't make a bit of difference in how they "walk".

2) Repairing uppers with fiberglass tape and polyester resin. One of my boots was worn through at the toe. I filled the hole with fiberglass tape shredded and saturated with resin, then put a patch cut from the tape over the top and smeared this liberally with resin. Push the whole thing down until there are no trapped air bubbles. It dried hard and durable. If you don't yet have a hole, all you need is to apply a patch and soak it in resin.

I put on about 1,000 miles on these boots before I repaired them, and have since added another 500. If the tire manufacturer's claims are true, the soles ought to be good for another 19,500 or so. And I leave the most unique foot-prints around.

Roger Hope  
Ruby Valley, Nevada



CROSSROADS

Traffic seemed fairly normal the first hour or so past Berea. But once he turned off 421 onto 666 D.R. went almost twenty miles without seeing another car and began to wonder if he had got on the wrong road somehow. He wasn't lost exactly but he was afraid he might be, and at night in the mountains on the Wilderness Road it amounts to the same thing. He drove on a while longer, looking for signs, but he couldn't find any and the road got narrower and narrower. To be on the safe side D.R. turned around and retraced his path to a crossroads where there was a sign that said 666. It was a confusing intersection and he sat there a minute studying the sign, making sure it referred to the road he was on. Two other county roads came into 666 from each side near a sharp curve, and in the dark you couldn't see very far down any of them. The only marker was the 666 sign, which as D.R. read it seemed to refer to the middle road. He looked at the sign and the middle road, and finally set out down it into the night again.

[Continued]

Shoes etc. 231  
Community



## Hong Kong

If you have the time (5 weeks or so), Hong Kong offers fantastic deals in cameras, tape recorders, motorcycles, binoculars, calculators, suits, etc. Prices generally include seasmal costs. You pay import duty (like \$15 on a \$118 Canon FT-QL—that costs \$280 in the States), and Customs obliterated the trademark. Catalogs are free.

We've had exactly no complaints about any of these firms.

—SB  
(Suggested by Terry Link, Thomas Dixon, Jas Hayden, Anne, Jim Kessler)

## Write to:

T. M. Chan and Company  
P. O. Box 3881  
Hong Kong

Far East Company  
P. O. Box 6784  
Kowloon, Hong Kong

Albert White and Company, Ltd.  
K. P. O. Box K-202  
Kowloon, Hong Kong

Universal Supplies  
P. O. Box 14803  
Hong Kong

Woods Photo Supplies  
60 Nathan Rd.  
Kowloon, Hong Kong

Mutual Funds Co.  
Box K 3268  
Kowloon, Hong Kong

Universal Supplies

## 司公限有家鞋靴記理



CANON F-1 (35mm) single lens reflex camera with interchangable eye-level finder, built-in TTL meter system and leather case (in BULK FINISH)  
with Canon FD 1/255mm lens (f/8.5mm) ..... 295.60 (5.60)  
with Canon FD F1.4/50mm lens (f/50mm) ..... 267.00 (6.10)

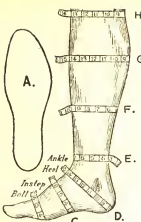


DIAGRAM A

## Lee Kee Boots & Shoes

Lee Kee Boot & Shoe-maker, Ltd., Universal Commercial Bldg., No. 55 Peking Road, Kowloon, Hong Kong—will make any boot, shoe you want— send them a drawing or measure picture & they'll do it to your size specifications. They charge for materials & not labor, so they're quite reasonable. If you'll write, they reply very speedily with price list & instructions to measuring your feet & sample sheet with range from dourfoot conform to anti-water & ostrich skin to some reasonably nice suede & plain leathers. All leather lined. Haven't received our boots yet but have heard they do great work. See ad price list enclosed. If I'm getting some knee high brown suede lace-up-the-front high-wood heel boots for \$25.00— made to fit my poor screwy feet.

Crow & Ceres Hyatt  
Coker City, Utah

## Hong Kong Suppliers

Friends: ~  
Below you will find a new suggestion for Hong Kong mail order, and, I would want a general review for all five firms.

### 1. Wood's Photo Supplies

Wood's has the following price lists, all of which are sent by airmail:  
A. 8 mm movie camera & projects  
B. Popular 35 mm SLR camera & lenses  
C. Tuners & amplifiers  
D. Speaker systems, turntables & record changers  
E. Stereo tape recorders and decks  
F. Portable tape recorders.

Wood's price lists arrived faster than any of the others. And as a company, Wood's seems to be the most personal and conscientious. Their information on U.S. import duties was most specific. All items with restricted trademarks (which must be obliterated) were noted. I even suggested that I contact customs before purchasing any item.

### 2. Far East Company

As far as I know, Far East company has only one catalog. It includes camera, projector, other camera accessories, binoculars, radios, tape recorders, and Hi-Fi equipment. The catalog was sent by air mail; and it arrived second fastest (a couple of days after Wood's).

Their information arrived and restricted trademarks. If you order enough Hi-Fi equipment to them, you get a discount.

### 3. Albert White & Co., Ltd.

White offers information on the following items. I sent for the camera catalog, and it arrived by airmail, third fastest (a few days after Far East Company).

- a. Photo Department catalog
- B. Motorcycles
- C. Office equipment
- D. Wooden carpets
- E. Men's custom tailoring
- F. Electronic desk calculator
- G. Chinese equipment
- H. Office commandal Furniture
- I. Norkite China
- J. Hi-Fi equipment.

I sent for information on motorcycles six months ago, and I haven't anything yet. The catalog of camera equipment made a somewhat inaccurate mention of import duties ("15% on camera equipment" it too general duty on still camera with original lens 10% extra lenses 17%). There was no mention of restricted trademarks.

## VIEW CAMERAS:

Canon (Common) View cameras	
432X w/10" Bellows	145.00
432X w/12" Bellows	180.00
432X w/16" Bellows	204.00
Recent Leica	11.00
Leica Holder	37.00
Leica Standard 432X	8.00
Leica Standard 432X	16.00
Canon View Camera 83X10"	370.00
Leica 63X"	11.00
Leica 63X"	28.00
Reducing Box 43X"	74.00
Reducing Box 53X"	88.00

Albert White & Co.

Alai (U.S. Named "Robert") Stereo Tape Recorders, Type Deck & Speaker System	
Alai Professional Tape Recorder X-360	470.00
Alai Professional Tape Recorder X-310	425.00
Alai Professional Tape Deck X-360D	425.00
Alai Professional Tape Deck X-310D	405.00
Alai Professional Tape Deck X-360D	380.00
Alai Professional Tape Deck X-310D	355.00
Alai Professional Tape Deck X-360D	180.00
Alai Professional Tape Deck X-310D	154.00
Alai Professional Tape Deck X-360D	121.00
Alai Professional Tape Deck X-310D	97.00
Alai Professional Tape Recorder X-180SD	288.00
Alai Professional Tape Recorder X-180S	288.00
Alai Professional Tape Recorder X-180L	222.00
Alai Professional Tape Recorder X-170W	172.00

## KENKO SPOTTINGSCOPEs

Zoom Spottingscope with metal tripod	
20x30x60mm Zoom type (non prismatic) with metal tripod	21.60 (1.60)
20x30x60mm Zoom type with metal tripod	31.00 (1.60)
20x30x60x60mm Zoom type 4-turret type with metal tripod	34.00 (1.60)
15-30x60mm Zoom type with metal tripod	34.00 (1.20)
20x30x60x60mm 4-turret type with metal tripod	56.00 (2.00)
20x30x60x60x101mm 4-turret type with metal tripod	71.60 (3.80)

## 4. T. M. Chan & Co.

Chan has three catalogs available.

- A. Photographic equipment (with a few portable tape recorders)
- B. Catalog from the "Gents Customs Tailor Department"
- C. Catalog from the "Custom shirts department"

I received the photo equipment catalog by surface mail. It arrived about three weeks after the one from White and Co.

There is absolutely no mention in Chan's catalog about import duties or trade restrictions. He says his prices are the lowest possible and invites comparison with other firms' prices, but as I have shown below, his prices are not the lowest.

## 5. Universal Supplies

Universal has a whole slew of brochures. When I asked them for their "catalogs," they sent me an arrangement telling me that a "supply of catalogs" was being sent by surface postage. A little more than a month later, that mail package arrived, weighing about 2 lbs., with all of the brochures listed below. All catalogs are sent by surface mail unless you send them money for air postage.

- A. Camera & accessories, binoculars, telescopes, rifles, spotting scopes.
- B. Art carved furniture.
- C. Ivory carvings.
- D. Suits watches—Titioti & Tugeri Breitling chronographs.
- E. Original Oil paintings.
- F. Legacy collection: Brastware, antique bronze lamp bases.
- G. Noriaki China.
- H. Roles watches.
- I. Casette—recorders, transistor radios, carry tape players, portable tape recorders & TV sets.
- J. Sony Hi-Fi components & tape recorder.
- K. Hand embroidered tablecloths in linen, cotton or lace.

The catalog of photo equipment lists import duties on all the photographic equipment, but they make no mention of trade restrictions.

## Guarantees:

- 1. Wood's—makes no mention of a guarantee. They may have one and they may not.
- 2. Far East—guarantees that what you ordered is brand new.
- 3. White—year your guarantee, free repair, free return by sea mail.
- 4. Chan—no mention of guarantee. Maybe so, maybe no.
- 5. Universal—same as White.

## Prices:

For camera equipment. Prices on Hi-Fi equipment seem to be agreeable with those of cameras, i.e., if prices are lowest for cameras, they are generally lowest for Hi-Fi equipment. Comments below are generalizations—they can be preface "on the whole".

## Lowest prices—Wood's and Far East

## Cloze third—Universal

## Somewhat distant fourth—Chan

## Definite Fifth—White

So, on the whole, Wood's & Far East have the lowest prices. But Universal has the lowest prices on some of the Hi-Fi equipment. I mean price of the item plus packing, handling, insurance, & sea mail shipping.

The only conclusion I'm going to make is this: If you are going to order any camera equipment from Hong Kong, write to the three top firms—Wood's Photo Supplies, Far East Company, & Universal Supplies.

Personally, I wouldn't order any Hi-Fi equipment from Hong Kong. The prices, after sea freight charges, are not exceptionally low. They can be equalled or beaten by some of the discount houses in the U.S.

Remarks No. 2—I have never ordered anything from any of the five firms above, so I don't know anything about service.

Jim Kessler  
Oxford, Ohio

## HALF-WELLINGTON BOOTS:

West German Calfskin, Scotch Grain	
or Rough Suede	US\$13.00
West German Calfskin Top with Genuine Shell Cordovan Vamp	US\$19.00
Genuine Shell Cordovan	US\$24.00
Kangaroo Skin or Fine Suede	US\$15.00
Du Pont Corfam	US\$16.00
Italian Soft Calfskin	US\$16.00

## International Shopping

I would strongly suggest that anyone who wants to make any large purchases should arrange a letter of credit with a local bank. This will protect your money and will guarantee the foreign merchant has his.

Don't forget that sea mail can take an awful long time—and that air mail doesn't run above \$5.00 per pound.

You can order lists of foreign businesses from the State Dept. They will send you a catalog of countries with classifications such as machinery, textiles, etc.

For \$1.00 they will send you names and addresses of specific companies (lots of them) for each classification.

From there you can write the company directly or go back to State for detailed reports on each company (assets, reputation, number of employees, language spoken, etc.).

This can be most helpful provided you have a pretty good idea of what you're after.

## A. G. Willis Washington, D.C.

## All Purpose Far East

Suppose someone wants a good camera, recorder, or watch at about half the regular U.S. price. Here's a legal way with no risk. Decide the brand and model number and get a local price. Then send a 13 cent airmail to Mr. Tan Tien Liat, 2 Jalan Teaneau, Singapore, 10 specifying the product desired. (Asian and European and American manufactured goods are all cheaper). Liat will refer your request to a local merchant who will reply by air mail within two weeks from the day you mail your request. They will quote a given price which will include the item, manufacturers guarantees, fabulous packing, shipping, and insurance by Lloyd's of London. You then send a certified check or money order in the specified amount to the merchant. If air shipping is used, it's seven days for delivery to the U.S. Seemal takes ninety days but who'd want to ship a recorder! Airmail? A lens is something else.

Your postman will deliver the parcel and collect customs but you'll pay a 10% extra on a \$40 lens is less than the same rate on the U.S. price of \$110. Singapore merchants make a profit, don't worry. But they think 10% markup is fair and Kodak has a standard 33%, Sears marks up over 40% and so on.

It's a good way to do business, and help Asia help herself by transferring capital from surplus to shortage areas.

Incidentally, —if the transaction doesn't work out, the Chinese Chamber of Commerce and Privileges in Singapore, Lee Kuan Yew, Singapore will investigate immediately on hearing from you. My US \$279.00 Minolta SP1 101 cost \$124.00 in Singapore. My Minolta 1015 extra lens cost \$90.00. I bought with good old Singapore merchants! In half a decade not one has ever let me down even a little.

Lloyd will send your insurance policy before the parcel arrives. Biggest mistake to make is that I lived near Angeles in California and I went to Singapore and found that Ampex stereo recorders sell for half the San Francisco price.

Wake up America. Regain the free trade heritage which initially made this country so great. Save dollars for America's best products: color film for example!

James M. Oswald  
DeWitt, New York

## Apocalypse juggernaut, hello

As if the spirits of our ancestors weren't trouble enough, now we're haunted by the ghosts of our descendants.

Ken Kesey claims that ecology is the current handy smoke-screen for everybody's Dire Rapture—the voice of white-eyed paranoia. Gary Snyder (strong proponent of population control) sees the end of an Earth of solid people impending soon, commented derisively "think of all that consciousness."

I tend to view the whole disaster as an opportunity to try stuff. If you take all the surprise-free projections for mankind's near future and connect them up, they lead neat as you please right into the dead end meat grinder. The only Earth we had, used up.

Unless there are surprises. Which is what we're here for. The Standard Operating Order, when a species is in a bind is to diversify. Multiply alternatives. If you don't know what's coming, the way to evolve ahead of the changes is to try everything.

Reasonable laws made by reasonable men in reasonable times proscribe trying everything. For a good reason: people get hurt trying stuff. If you should to try stuff anyway, then either you're working directly for City Hall or you're an outlaw, or both.

Buckminster Fuller:

"It surprises people when you tell them that since the last ice age the three-quarters of the earth has been water, and of the one-quarter that is land very little has been lived on. Ninety-nine percent of humanity has lived on only about five per cent of the earth, and anyone who went outside of it—the tiny minority that went to sea, for example—immediately found himself outside the law. And the whole development of technology has been in the outlaw area, where you're dealing with the toughness of nature. I find this fascinating and utterly true. All improvement has to be made in the outlaw area. You can't reform man, and you can't improve his situation where he is. But when you've made things so good out there in the outlaw area that they can't help being recognized, then gradually they get assimilated."

[From Calvin Tomkins's profile of Fuller, "In the Outlaw Area," *The New Yorker*, Jan. 8, 1966]

Present outlaw areas include space, the oceans, mountains, desert, northwoods and tundra, jungle, and then places like molecular biology, your mind, and other state-of-the-art frontiers whose languages are still foreign to lawmakers.

One thing we need is better outlaws. The antidote to external routine is internal routine, no slogans. The finding and following of your own dream. Help save the world: do something wrong today. Do it today because time is short, and capable outlaws aren't made overnight.

Is it a contradiction to design an outlaw area? In the past there was always undesirable frontier to serve, some space left over or not reached yet. If we run out of that resource, can we synthesize it, or intentionally preserve it? Or will it spontaneously bubble back up in the midst of our cities? (Oh yes.) I suggest that we must give the devil his due or he will surely extract it.

Any design fantasy is just loose talk until it happens. Here's one.

—SB

## Est

A more creative than usual call to political action.

—SB

## Est—the Steersman Handbook

by Clark Steensma  
1970, 142 pp.  
\$1.50 postpaid

from:  
Capricorn Press  
705 Anacapa St.  
Santa Barbara, CA 93101

or WHOLE EARTH CATALOG



The definition of revolution, "the overthrow or renunciation of one government or ruler and the substitution of another" does not accord with the present continuum of events. The upheaval in America today involves a chaotic surf upon which would be revolutionary steal wild rides, but to define the upheaval as revolution is to fail to discern its essence. It is not organized. It has no plan. It has no discipline. There is no pattern, no structure—no leaders and no followers. It happens. It is.

## Guidance System

To the degree that a corporation serves the purposes of its original founder, it tends to be "humanoid." Mr. Post cared very much about himself and personally mixed, aged and tasted the products as his personal substitute for coffee. Henry Ford spent much of his early life under the hood of the Model T and would tolerate no compromise in its design. Walt Disney held exact standards for his cartoon characters, and Land of Land Camera,

## Loose Talk 1: The Outlaw Area

The specific fantasy called OUTLAW AREA is a geographical place where anything goes. Let's say it's an island.

For society it functions as a human dumping station. When a guy gets a jail sentence he has the choice of serving the sentence or being deported to the island. He can't come back for some specific period of time, or he must meet some bureaucratic criteria to return, or the expulsion is permanent. Yesir, put all the bad apples in one bad apple barrel.

For the individual it serves as an always possible alternative to the situation he's in. He can simply split for the island and take his chances there. No one's going to try to get him back.

For evolution it's an open end, a place for other stuff

to happen. High energy, minimum prior form, violent range of constant inputs; it should be wild. "In wildness is the preservation of the world."

It's difficult to imagine how it would be in the Outlaw Area. You can project some from the history of Australia, once a penal colony, or from the present underworld. Robert Heinlein has a book about the Moon as a penal colony called *The Moon is a Harsh Mistress*. It's kind of nice: they have a revolution and throw the jailers out.

Depending on the size of the island, my expectation would be either a dictatorship or warfare of rival gangs, like in old China, warlords. Maybe not though. This is a different age. The island might become an Aquarian haven for the most useful pioneers—the cream and the dregs of society. (Kesey's notion) bending reality off into unimaginable directions with no restrictions save the harsh ones of nature.



Aquarian Haven

Photo from "Open Land: a manifesto" published recently for defense of the commune at Wheeler Ranch, Box 81, Bodega Bay, CA 94923.



But ten or fifteen miles later D.R. grew so doubtful that it was right he stopped and backtracked again. It just couldn't be the right road. The farther he went the narrower it got, and there wasn't a house or a road sign on it. D.R. went back to the roadside, pulled out the map and looked around inside the bus for a road sign of Kentucky.

There wasn't one, of course. There must have been a dozen roadmaps scattered around, including one of the Eastern United States that showed the freeways in Kentucky. But for driving on the local roads away from the traffic mainstream there wasn't a map in the bus that showed the way and that pissed D.R. off and scared him at the same time.

His first impulse was to blame Estelle. At about the moment he realized he wasn't going to find a Kentucky road map he came across Estelle's knitting bag in a pile of stuff behind the driver's seat. In his mind the knitting bag, and its owner, seemed to be responsible for there being no Kentucky roadmaps. In a fury he grabbed the bag and flung it out Ugh's side door. Some of the yarn fell out and tangled up around D.R.'s feet. In trying to get it off he tied his hands up in it for a second and that almost drove him crazy. He screamed through his teeth and started flinging things left and right. When he came to something that felt like Estelle's he tried to throw it out the door, but most of it caught on the door facing and piled up at the foot of the bed. D.R. picked up his cassette recorder and almost threw it too, but he caught himself and turned it on instead. The voice of the Greek or other patriotic emblem, the Constitution is the original structure designed to guarantee the unstructured freedom of peaceful individuals. Defense of the Constitution is defense of the individual. Free U.S. citizens are not right-wingers. Rights are not gifts given by governments. Defense of the individual is the defense of inalienable human rights: Peace, Love and Freedom. The Movement can achieve coalition within the widest disparity if it recognizes that in the Constitution there exists a chart by which to navigate continuous change. This does not suggest a global application, but for America, in the coming decade of conflict, it provides valid, familiar and necessary articles of freedom.

(continued)



Ed McClanahan found these notes by Ken Kesey in a box of stuff, two and a half years after Ken made them the night he got out of jail. The notes were made as Ken was waiting to be released. They are published here unedited, and unedited.

—Gurney Norman

FRIDAY OCT 10,

"A TANK,

MAYBE THE LAST TIME

And as I come in dressed in my usual street business, leather, striped pants and shoes, whistle hanging out, Derner takes one look and his already stone face freezes even harder.

"All right, Kesey, give me everything."

"What?" Usually they let the honor camp men take in anything except knives or watches.

"Everything. I don't want you in there blowing your whistle."

"Okay, then, make me out a property slip."

He gives me a steady unwavering stare through the bars. Tears a scrap of paper from a notebook and slips it in the typewriter.

"One Whistle," I say. He doesn't type. "One yellow pen." He continues to glower, stoney cold unmovable. "Come on, I want a property slip." I'm worried about my two camp notebooks is what we both know.

"Just put it all in the trough, he says. "In fact, strip out of that jacket!" He comes out of the cage. I take off my leather jacket. "Hands on the wall. Spread 'em." He gives my feet a kick. "Now. Don't move!"

He frisks me, the whole show. Taking pens, sunglasses, handkerchief, everything. And my two notebooks, wrapped in the farewell card Stevenson made and the camp guys signed.

"Listen. I get a property slip for this stuff."

"While you're here, you do it my way," Derner lets me know. No malice in his voice. No anger. Just stone information and not to be argued with.

"Okay then," I hold up my two notebooks. Show them to Deputy Johnson. "Witness these?" And the rest of the men waiting in the receiving hallway. "You guys check this?" Then hand the notebook to Derner.

"You think the rest of your book will come out in Ramparts?" Deputy Johnson asks.

"No, it'll be a book of it's own."

"You'll have to change the title then."



Thursday Oct 10  
A tank  
Maybe it's the last time.  
And so I come in dressed in my usual street business, leather, striped pants and shoes, whistle hanging out. Derner takes one look and his already stoney face freezes even harder. All right, Kesey, give me everything. "What?" Usually they let the honor camp men take in anything except knives or watches. "Everything. I don't want you in there blowing your whistle." "Okay then, make me out a property slip." He gives me a steady unwavering stare through the bars. Tears a scrap of paper from a notebook and slips it in the typewriter.

"I'll bet you a carton I don't," I say, watching my pens and notebooks disappear through the cage window.

"Okay, Kesey, you can move on. Next."

I come to A Tank. Boro is still here. In blues now. But still trying to keep up that old front. One by one the other guys show up. Derner has given them each the same treatment taking cigarettes, everything.

"Sorry about that," I tell them. "I should have been way at the back so you could have gone through first. But he saw my outfit and it blew his head so he had to follow through with the rest of you."

"Yeah," Boro says. "Stir clear of Kesey, he brings you nothing but trouble."

"Kesey!" Keys jingle. "Man's here to see you." Door slides open. I follow the turkey to where Faber waits in front. He tells me I'm getting out at midnight. Who'll be here to pick you up? Who knows.

And he wants to see my notebooks. I'm leery but I figure better him than Derner. "Go ahead."

"And you're to be in my office Monday morning at 10:30 to sign your release to Oregon."

I say okay. We talk a little more about the camp. I tell him that all the camp needs is support from Redwood City. He hems and hums. Asks me when I think The Book will be coming out. Who knows? When it quits happening. "This talk will be in it. Our talk Monday morning will be in it. Your reaction to what you read will be in it. It will be finished when its all over."

And Boro shouts Kesey. "Put this down. Put this down in your fucking book. A guy—me—a guy plays pinocchio 4% months with the motherfucking brass up there—4 and one half months—and one of the deputies misses a pack of Winstons when I leave and he calls down and asks what brand of cigarettes did Boro come in with. I mean, ain't that cold, man? Ain't that a bitch?"

Weekenders—bringing the Street in to tantalize you.

You can be made to serve double time—now time and street-to-come time—even triple time which adds street-age time and is called guilt. But the man who pulls straight time—now tripping is neither short or long but serves in Eternity and very close to paradise.

More Weekenders. A Tank grudgingly burgeoning. "Hey Deputy, we already got motherfuckers, well to wall." Boro has a way of sniveling so it sounds like a banty crowing.

Drunk tank wall to overflowing  
Motherfuckers wall to wall  
Coming twice as fast as going  
Heads get big and the tank gets small.

Dominoes slapping on the table  
Bloods playing bones in tank next door.  
Bust a bone if you be able  
Red Death stick it good some more.

Three days past my kickout time  
Ask to phone but don't get the juice.  
And crime time crime just equals more crime  
Cut the motherfuckers loose.

Will I make the Christmas kickout?  
Will commissary come today?  
Will they take my blood or take my good time?  
Or just rip my guts away?

Some snitch has found my fucking outfit.  
They've staked a bull up at the still.  
They've found the pot sprouts I was sprouting  
At the bottom of the hill.

They've punched my button, pulled my covers,  
Blown my cool and ruin my ruse  
They rehabilitated this boy  
So cut this motherfucker loose.

And the fish that angles for the bull  
Let him off his heavy rod  
And off that suckers the gavel banger  
Cut him loose from playing God.

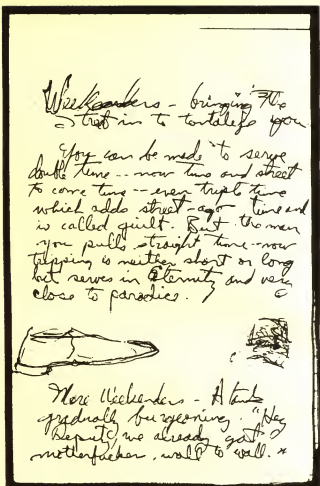
Back off from Johnson all you peace freaks  
So he'll back off from Vietnam  
Cut loose the squares, cut loose the hippies  
Cut loose the dove cut loose the bomb.

You the finger on the trigger  
You, the hand that weaves the noose  
You, you hold the knife of freedom  
Cut all the motherfuckers loose.

11:30

After a long talk with Braun, soft-peddling in circles and coming in Contact occasionally—back to A Tank.

Simpson: "I just don't trust Braun. I don't think he's got any balls. I think he's basically weak and I think he's trying to build his image by associating with you, Ken Kesey."



I know all that. But I'm also onto what he wants to be—the strong thing he wants to be. And I'm willing to try to protect that image.

at a voice at the bars: "11:30. Kesey? Yeah. You ready? easy as I'll ever be. Come on then."

And into receiving where an old colored dude is excitedly getting into his clothes. Typing of forms next door. Ritual of red tape typing, gently typing at my chamber door—

The colored dude—an old shoe-shiner packs his work gear into a black cardboard box and ties it with a rag. His shirt is white and looks nice. His shoes are a sensational gloss.

"What you in for?"

"Oh I pulled a knife. Woman called the cops. Wasn't no actual fight. Well, I on my motherfuckin' way..." Picking up his bag and putting on his hat.

"Gessir on my way."

"Good luck to you."

"Lost some weight here. Needed to. Met some good people too. All right now..."

A young blood stops him, gives him his address.

"You all better print it. That the only way I can read it."

"Take it easy now, Pop."

"All right. ..."

The kid leaves. "Damn fool tramp. Got some motherfuckers in this jail. Oh, I'm ready. City be just right. I get the right bus, that is."

Still no call to leave. He fingers a cornucopia full of tobacco, lights it, goes to lean at the door. "What the time?"

"12 straight up," the deputy says.

"Oh, I'm ready."

"If my people are there I'll give you a ride to the bus station."

"Appreciate it. Didn't sleep all night. I got nothin but time now. What you in for."

"Dope. Yeah."

"That a weed. That good green stuff. Make you feel good. If God hadn't wanted it on air it he wouldn't put it here would he. That a stone shame. How much they give you."

6 months. \$1500. 3 year tab.

"That a motherfucking shame."

"Well. It's done."

"I reckon."

"Rucker!" a bull's voice calls.

"I comin'."

"And I'm alone on the bench with his half-drunk cup of coffee, spoon still sticking out of it. His blues on the floor. The polyethylene bag his suit had hung in in the corner.

"Ken."

CONFIDENTIAL 200



All power to the persons.

—SB

## Rules for Radicals

Toward a science of revolution. Much radical literature is aimed at fighting. This book is aimed, by an expert, at winning.

Rules for Radicals

Saul D. Alinsky

1971; 196 pp.

\$6.95 postpaid

from:  
Random House  
Westminster, MD 21157

or WHOLE EARTH CATALOG

I believe that man is about to learn that the most practical life is the moral life and that the moral life is the only road to survival. He is beginning to learn that he will either share part of his material wealth or lose all of it; that he will respect and learn to live with other political ideologies if he wants civilization to go on. This is the kind of argument that man's actual experience equips him to understand and accept. This is the *only* road to morality. There is no other.

Power is the right word just as self-interest, compromise, and other simple political words are, for there is no other way to have and become part of politics from the beginning of time. To ponder to those who have no stomach for straight language, and insist upon blind, non-confrontational success, is a waste of time.

Tactics means doing what you can with what you have. Tactics are those consciously deliberate acts by which human beings live with each other and deal with the world around them. In the world of give and take, tactics is the art of how to take and how to give. Here our concern is with the tactic of taking; how the Have-Nots can take power away from the Haves.

For an elementary illustration of tactics, take parts of your face as the point of reference; your eyes, your ears, and your nose. First the eyes: if you have organized a vast, mass-based people's organization, you can parade it visibly before the enemy and openly show your power. Second the ears: if your organization is small in numbers, then do what Gideon did: conceal the members in the dark but raise a din and clamor that will make the listener believe that your organization numbers many more than it does. Third, the nose: if your organization is too tiny even for noise, stink up the place.

Always remember the first rule of power tactics: *Power is not only what you have but what the enemy thinks you have.*

The second rule of tactics is: *Never go outside the experience of your people.* When an action or tactic is outside the experience of the people, the result is confusion, fear, and retreat. It also means a collapse of confidence in the leader.

The third rule is: *Wherever possible go outside of the experience of the enemy.* Here you want to cause confusion, fear, and retreat.

The fourth rule is: *Make the enemy live up to their own book of rules.* You can fill them with this, for they can no more obey their own rules than the Christian church can live up to Christianity.

The fifth rule is: *Use the enemy's own tactics against them.* The fourth rule carries within it the fifth rule: *Ridicule is man's most potent weapon.* It is almost impossible to counterattack ridicule. Also it infuriates the opposition, who then react to your advantage.

The sixth rule is: *A good tactic is one that your people enjoy.* If your people are not having a ball doing it, there is something very wrong with the tactic.

The seventh rule is: *A tactic that drags on too long becomes a drag.*

The eighth rule: *Keep the pressure on*, with different tactics and actions, and utilize all means of the period for your purpose.

The ninth rule: *The threat is usually more terrifying than the thing itself.*

The tenth rule: *The major premise for tactics is the development of operations that will maintain a constant pressure upon the opposition.*

The eleventh rule is: *If you push a negative hard and deep enough it will break through into its counterforce.* This is based on the principle that every positive has its negative. We have already seen the conversion of the negative into the positive, in Mahatma Gandhi's nonviolence and the tactic of the "good cop/bad cop."

The twelfth rule: *The price of a successful attack is a constructive alternative.* You cannot risk being trapped by the enemy in his sudden agreement with your demand and saying "You're right—we should do this to do this issue. Now you tell us."

The thirteenth rule: *Pick the target, freeze it, personalize it, and polarize it.*

What do I want? I want a spring, well, I want it to run the dike, the outside dike, and of course the real problem is how to get a bend out of this motion. Let me look at the motion again. How do you get inside that spring? If I... there were an enormous spring, a spring set big as a house, and I hold it on it and it goes in and out in and out.

What happens to me? Well, let's see, I can put a little drop of ink on the thing. Now I wind it in and out it winks. I get a spring big enough, as the spring tightens... the blob of ink will move in... and out as the spring relaxes... "Pum!"... now I have the feeling that this thing is on its own, completely outside me... that the whole idea is no longer... no longer anything to do with being mine... it's its own... it's just like firing now because if I put a spot on the spring and tighten it up, it becomes an arc which is exactly the same. The looking at it... (Fig. 1) (Fig. 2) (Fig. 3) (Fig. 4) and this is no longer I... it's as though it was taken away from me... This must be what people mean when they say you start with a play and the people you've put in the play just go on by themselves."

2:36 Organization  
Community

## Vocations for Social Change

All about alternatives, by people who are living them. Mainly employment, but that's a whole lifestyle, becoming your vocation, the most integrated part of the search. How to work at changing the world.

—Hal Heyser



## Vocations for Social Change

free 6 months (bimonthly)  
if you send a donation of \$5.00

from:  
Vocations for Social Change  
Canyon, California 94516



## Economic Alternatives

Co-op League, Carol Hill, 1012 14th St. NW, Washington, D.C. 20005, publishes several pamphlets of how-to-do information for starting or managing alternatives. They are: *A Manual of Basic Co-Op Management* (\$1.00); *To Tell the Truth*, an outline of common information and practical activities (\$2.75); and *Co-Op Depot*, an extensive how-to-do-it (\$3.50). They also distribute a film, *Changing It*, about the establishment of a co-operative food store in the inner city. Phone: 202 628-0000.

*Cooperative Services, Inc.*, 7404 Woodward, Detroit, MI 48202, is a big co-service group. They can help get co-ops off the ground.

DeVoorp, Don Newmy, 26 Exeter St., Boston, MA 02116, provides a continuous buying club service to help consumers find better quality food and encourage the producers to provide better quality food.

Anyone interested in either joining a buying club in your city or helping to organize one should contact them.

*Foundation for Cooperative Housing*, 1012 14th St., NW, Washington, D.C. 20005.

*North American Student Cooperative Organization*, 1500 Gilbert Ct., Ann Arbor, Michigan 48105, is a clearinghouse on cooperatives in the U.S. They have information on all forms of cooperatives: credit unions, groceries, laundries, eating clubs, etc., "as long as they are cooperative." In addition to their newsletter they publish a directory of cooperatives entitled *Crashing in North America*.

## Synectics

An outline of a method for training creative groups and maintaining their creativity in the business environment. This book provides both the theoretical and practical background and the practical details of how to put the method to work. Although written for use by business executives, the applications to other situations are obvious and important. Anyone attempting to create a commune or other group of people who will work together creatively will find many useful ideas here. The problem of interface between the creative group and the workaday world is also treated in some detail. Extensive examples of the method in operation, and a lengthy bibliography on creativity.

[Reviewed by Larry McCombs.

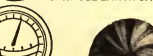
Suggested by Jane Burton.]

Synectics  
William J. J. Gordon  
1961; 180 pp.

\$1.25 postpaid

from:  
Collier Books  
866 Third Avenue  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



## The Organizer's Manual

this book earns its buck and a quarter in its sixty-page bibliography, the other three hundred pages contain information of use to potential and police revolutionaries, people who know they should be doing something, but don't feel right about generating unstructured change. structures and groups, rules and techniques, hints and helps for the gentle displacement of dinosaurs and pigs. like telling you to get medical attention for a bullet wound, put eggs under the basking sun on your face before the torques attack, notify the media twentyfour hours ahead of time, watch out for chain letters; that you will get into arguments, and not to make the worker unwilling to be seen with you.

—J.d.

The Organizer's Manual  
The O.M. Collective  
1971; 365 pp.

\$1.25 postpaid

from:  
Bantam Books, Inc.  
666 Fifth Ave.  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

Ecology action organizations should provide the following services to the community: a regularly distributed newsletter on what has to be done and what has been done; give rise and discussion meetings and community projects. Scout tours, women's clubs, school groups, etc., are good places to plant separate ideas.

Within the organization itself, utilize a storefront office as a place from which to (1) publish research; (2) keep a file on local pollutants; (3) document the legislative records of local congressmen and representatives to see if they match research; (4) publicize an environmental hot line which gives the phone numbers of government agencies in your area to contact about instances of pollution; (5) lobby for legislation banning the internal-combustion engine and funding good efficient mass transportation; (6) start an ecology food store which specializes in organic food, renewable materials, and minimal packaging; (7) in conjunction with the food store, establish an ecology counselling service which develops with people ways to run an ecologically sound household; (8) send out speakers, movies, and literature; (9) distribute birth-control information and devices (check the legality so you know the situation). Demand that abortions and birth-control devices be provided free. (10) organize boycotts against local or national firms which insist on operating without regard to the environment; (11) send out guerrilla theater groups to hold mock funerals for rivers and other dying resources or hold parades for clean air complete with balloons, gas masks, drums, and coughing participants; (12) initiate campaigns to return all bottles, cans, and excess packaging to stores. Ask that it all be sent back to the manufacturer; (13) watch over, and fight when appropriate, "urban renewal" zoning, highway and airport projects, university and corporate expansion into surrounding neighborhoods; (14) set up "people's parks" in abandoned lots; conduct neighborhood cleanups (with community consent and participation).

## Guerrilla Theater

*Anthology of German Expressionist Drama*, ed. Walter Sokel, Doubleday Anchor, 1969, \$1.75.

*Brecht on Theatre*, ed. J. Willett, Hill & Wang, 1964, \$2.45.

*Commedia dell'Arte*, G. Orgel, Hill & Wang, 1968, \$3.95.

*Complete Plays and Prose*, Georg Büchner (trans. C. R. Mueller), Hill & Wang, 1963, \$1.75.

*Eyes on Mime: Language without Speech*, Katherine Walker, Day, 1969, \$4.95.

*Guerrilla Theatre Essay* (pamphlet), San Francisco Mime Troupe, Dept. R, 450 Alabama St., San Francisco, Calif. 94110.

*Happenings: An Illustrated Anthology*, ed. M. Kirby, E. P. Dutton, 1965, \$1.45.

*Imagination: Discovery and Creativity in Drama*, J. Holgson and E. Richards, Barnes & Noble, 1969, \$2.25.

*Modern French Drama: The Avant Garde, Dada and Surrealism*, M. Benedikt and C. E. Wellwahr, E. P. Dutton, 1964, \$2.75.

*New Underground Theatre*, ed. R. J. Schroeder, Bantam, 1969, \$1.25.

*Organizing a Community Theatre*, S. Seldan, Theatre Arts Books, \$1.75.

"Politics of Performance," *The Drama Review*, and most issues of this quarterly since 1968, TRD, New York University, 32 Washington Pl., New York, N.Y. 10003, \$5/yr.

*Radiol Theatre Festival*, San Francisco Mime Troupe, Dept. R, 450 Alabama St., San Francisco, Calif. 94110, \$1.50. Discussion of the nature and practice of radical theater.

*Stagecraft for Non-Professionals*, R. A. Boeki, University of Wisconsin Press, 1955, \$1.50.

*Toward a Poetic Theatre*, J. Grotowski, Clarion, 1969, \$2.45.

*Ubu Plays*, Albert Jarry, Grove Evergreen, 1960, \$1.95.

## A Rap on Race

Some life and some light on deadly subjects like America, Race, The World, The Future, Where We Come From, What's Happening, by... it's a black and a white, or bright young man and a bright old lady? Foxy sweethearts.

—SB

## A Rap on Race

Margaret Mead, James Baldwin  
1971; 256 pp.

\$6.95 postpaid

from:  
J. B. Lippincott Company  
E. Washington Sq.  
Philadelphia, Pa. 19105  
521 5th Ave.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

Baldwin: This is very funny. Go on.

Mead: But I had reversed it, and my picture of rape was of a black woman raped by a white man. He was a butcher, too, and that's one of the things I thought of: he was a brutal character. So whenever I dreamt of rape, I dreamt of this black woman being raped by a white man. And our master insisted on our calling her *Kinz*... this is 1912. And whenever she turned up in a dream, I knew exactly what I was dreaming about. This is a straight reversal of ordinary American experience.

Baldwin: There's the right. The ordinary American mythology is entirely different. I suppose that explains a lot about you.

Mead: Probably, although I'm not completely free. You see, I don't think any American—any white American—is free of a special attitude toward American Negroes. Just as you're saying there aren't any Negroes outside of America. We are often nice to other dark-skinned people. We treat African princes and Indians with turbans very well. When I went on... My first field trip was to Samoa. Well, of course, the Polynesians are people everybody thinks are beautiful. If you look at them very closely, they are not really the most beautiful people in the world by any absolute standard. Yet everybody thinks they're beautiful. Chinese people think so, black people think so, everybody thinks so. I've never figured out why: that for maybe two or three thousand years they never saw anybody but themselves, and they think they're beautiful and they are so impressed with themselves that everybody else thinks they're beautiful. If you think you're beautiful, you move like a beautiful person.

Baldwin: In the name of your ancestors; let us put that away. I have heard myself walking around the house singing a song I had forgotten, or didn't even know I knew, because I had to get through something and I had to find the only weapons I had. You reach out and you pick up whatever there is to confront this moment and then you're there. This is the only way to confront this moment. Mystery is the only way I can define it. It is the only way that it seems to me that your ancestors give you, if you trust them, something to get through the world.

## Handbook for Conscientious Objectors

The most comprehensive and authoritative single guide to the legal requirements and procedures for C.O.s under the present draft law. The book does not advise you to become a conscientious objector, but it does lead you in thinking through your beliefs and realistically making a decision about the draft. If you are considering asking your draft board for conscientious objector status, considering resistance, or just exploring your alternatives with the draft, this book is valuable. It also has information for C.O.s in the military, and describes the possible alternatives of court and prison.

CCCO also provides counseling, legal advice, help with bail, and publishes information useful to counseling agencies, lawyers and objectors. CCCO is non-church related, and lives on voluntary contributions.

(Reviewed by Fred Richardson,  
Suggested by many.)

## Handbook for Conscientious Objectors

Edited by Ario Tatum  
110 pp. Updated frequently.

\$1.00 postpaid

\$4.00 for five, postpaid

from:  
Central Committee for Conscientious Objectors  
2016 Walnut Street  
Philadelphia, Pa. 10103 or the west coast office:  
67 Market Street  
San Francisco, Ca. 94105

or WHOLE EARTH CATALOG

## Robert's Rules of Order

If decisions are required from a group that doesn't always have consensus, these rules will organize the tangle enough to get through it.

—SB

Robert's Rules of Order  
Pachel Vixman commentary  
1967; 204 pp.

\$0.95 postpaid

from:  
Pyramid Publications, Inc.  
444 Madison Ave.  
New York, N.Y. 10022

or WHOLE EARTH CATALOG

When Thomas Jefferson became President of the United States, he published the first American book on parliamentary procedure in 1801. This became one of the main sources for the rules in Congress and continued to be the foremost authority on parliamentary procedure until Cushing's Manual was published in 1844.



## Black Reading List

Robin's Distributing Company lists 600 books "relating the Black Experience" and 200 or so other revolutionary political titles. Looks pretty comprehensive.

—SB

## "BALLOTS or BULLETS"

by MALCOLM X



## Catalog free

from:  
Robin's Distributing Company  
2 North 13th Street  
Philadelphia, Pa. 19107

## Win

to change people, you must communicate with them. there are a number of ways to go about changing a person's mind. walk up to him on the street, grab him by the carnation lapel, and yell "boogeyshoo, you mistake bastard!" or catch him asleep and whiger honnydricks of sweet poison into his ear... "think, think, think, think, think, think, think..." or become a soothsayer, truthsayer, set yourself up as an honest person, say what you think in a cluster of different accents, get your han Dying gestures down, and pretty soon you'll start listening to whatever you are putting out. to work this alternative, though, you must either have a high reputation, indian chief, lawyer, god, or you must have a pile of power, the president of a large north american country. you can change society with painting, bombing, sidewalk scribbling, love, banking, unbanking, skywriting, prayer, retelling, and meditation, but, power to the people, you must change people to change society.

It tries.  
It is a together magazine.

—jd

## Win

twice monthly, except for occasional monthly issues.

\$5.00 yearly

from:  
Win  
339 Lafayette Street  
New York, New York 10012

In the ancient Runic writing, common to the Scandinavian and Celtic lands, the symbol  $\odot$  signifies "Man Dying." Contained within a circle,  $\odot$  the symbol signifies "Man Dying in harmony with the established forces of Nature, to be reborn." Likewise, the symbol  $\uparrow$  signifies "Man Worshiping." Contained within a circle,  $\uparrow$  the symbol signifies "Man affirming Life in harmony with the Cosmos, the established forces of Nature." In both cases, the symbol is extremely positive, an affirmation of the place of the person in a creative Cosmos, and from this ancient use as well as from its later derivation from the Semaphore letter, it is most appropriate to signify that that surrounded by forces of hatred, death, and destruction we must choose love, life and creativity. In the words of the Old Testament prophet: "I have set before you this day life and death, a blessing and a curse. Therefore, choose life!"

It remained for Henry Martin Robert, an engineer and general in the United States Army, to modify these rules to meet the needs of "ordinary societies." His first *Robert's Rules of Order*, published in 1876, soon became a handbook for organizations, clubs and schools all over the land. In a constructive way, it exposed the uselessness of attending meetings that began late and dragged. It gave enlightenment and comfort to frustrated members who, without knowledge, were easily victimized by overbearing chairmen and ruthless small cliques. And it armed the general membership with the know-how to combat those seeking to push through controversial resolutions without proper consideration.

## Motive

A soft-spoken, attractive, radical magazine from the South.

—SB

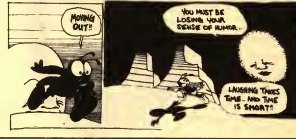
## Motive

\$5 /yr (monthly)

from:  
Motive  
P.O. Box 871  
Nashville, Tennessee 37202

Our commitment to revolution must contain a recognition that we ourselves are damaged; a revolution is not a gift bestowed on others, but a process beginning with our own selves and moving outward to a fuller and more human sense of self. Blacks and women should have taught us that revolutionary politics is the effort to overcome our own victimization—this is the only lasting success. Guilt over what has been done to the others is simply not sustaining, whatever its other noble virtues. It is urgent that we confront first the facts, then the sources of our own poisoning, and make it will be risky and terrifying a confrontation as we on the streets. We all want to believe that we can remake ourselves simply by wishing, or by some mechanical act; but could it be that the society we know to be so pernicious toward blacks and Vietnamese let us off with a wish or a single decision?

There are a lot of specific revolutions that the movement should make in itself. Everybody has stored up his own list, but if there is a name for the attitude I would like to see, it might be revolutionary humility, a way of living we will have to take and make the time to struggle for. And I do not pretend that, in some sweet utopian operation, we can liberate ourselves if we only disintegrate ourselves enough. The process of liberation must remake the society as in the process we remake ourselves. It is said that Moses' liberation army had to undertake its 40-year-long march through the wilderness because no ex-slave would be fit to live in a new society. Do we dare now to decide that the revolution is not simply for those who come after us but for ourselves?



Imperialism is far older than capitalism. It goes back to Alexander the Great wanting to conquer the world to give it the blessings of Greek culture—and even earlier. It includes the wars unleashed by the church to give the world the blessing of Islam and those unleashed by the Church to convert the Infidel. Economics has sometimes been important, but only because it has made the colonies would bring greater riches than they did. And even then not colonies have brought their mother country closer to bankruptcy than anything else. Partly because of this, the nineteenth century English ruling class believed colonies were profitable they struggled relentlessly against American independence. To practically every- one's surprise the profits of English business in its trade with America increased fantastically after the revolution. In fact, the growth of America unleashed by the revolution was one of the most glorious things that ever happened to England. But the Liberal English economists like Hukisson argued on the basis that England should let all colonies go. However, the glory of empire evidently moved stronger than strictly economic motives and so England held on to its colonies.

Walking road a lonely road dark hills a starless moon-  
less night green-sleeved breezes leaves of willows sycamores  
down the bank I cannot see the road warm from afternoon  
the air cool from evening stirring leaves of willows sycamores  
down the bank below the road I cannot see but they are willows  
sycamores for there's a creek somewhere I smell it Behind the  
ruins of the crickets and the frog I hear it bubbling  
Through a shade. The moon's disk. The sky's small  
animals' taste night as cool bits the coolness of the air against  
my skin not driving "I'm not driving only walking step by  
step through darkness on a starless moonless night along the valley  
green-sleeved breezes stirring in the leaves Beyond the panic  
of the time that the dark clothes my fringe came seared in  
shroud of fearful ghosts that chased me driving "I'm not driving  
now I'm being driven pulled into the night small railroad  
tracks crows and steel and splintering ties with long steel  
bolts into them small wheels over the track  
know the tracks bend know the creek bends into the folding  
of the hill small tracks remember placing nails upon them  
for a train to flatten into horseshoe nails pennies into Roman  
gold remember boys along the tracks counting cones and waving  
at the train in the caboose small wheels over the track  
small stream hear wind in sycamores see light upon the dark-  
ness up ahead a peak eye's lightning bug bobbing  
up and down twinkling it's a star it's my brain shooting  
sparks behind my eyes it's some strange foxglove in the woods  
above the road grow larger walk down the road Stow still a step  
for surely stopping stop it growing larger don't jump around  
don't get no bigger the light is larger every step that I don't  
take the frog and crickets all have hushed their singing  
don't come no bigger don't light up the world pupils light gets  
bigger coming closer I can hear it I can feel it I can see it  
I just before him hissing on the forehead no please on the  
forehead of a man.



## Wildcrafters

If you think *hangers* are the only people running for the woods before the smoggy sky falls in, *The Wildcrafters* publications may broaden your view. They're the work of old geezers who grove on hunting and gathering food and fantasizing and opinionating about independence just like thee and me. We ought to get together and have a geezer conference.

—SB

water witching  
fishing tips  
snow glob  
future feminine  
nut trees  
mountainmen  
antique barb wire  
flour mills  
board warring  
a back to the sticks whole earth catalog,  
written by the folks who read it.

—jd

### SURVIVAL HINTS

BEWARE of slipping, tripping or falling.

## Wildcrafters World

\$1.00 yearly

Homesteaders and

Landerfraters Newsletter

\$2.00 per year (6 issues)

and assorted \$1.00 manuals

from:  
Wildcrafters Publications  
R. R. 3, Box 118  
Rockville, Ind. 47872

### SALE OF TIMBER

If you own farm or country property with a woodlot of land or a tract of land or large parcel on the mountain in timber country, use caution if someone comes along and wants to make a deal to cut the logs or pulpwood. Talk to your area Forest Ranger or County Agent. You can be guided by what they tell you. Also have a deposit and a contract from the lumberman. Keep in mind that it takes a lifetime to grow a logging tree, and you don't want to be cheated. We used to figure that it took 70 years for decent growth of spruce to mature. Of course, pulpwood cut in smaller growth, large pulpwood bolts have to be split. I know of one woodlot owner that was offered \$900 for the timber rights of the entire stand on his woodlot. He checked with the Forest Ranger who told him that did not seem like enough money. He gave him the name of a Timber Cruiser, the cost was not great, but the final agreement on the cutting operation was \$2,800.00. I know of several other cases, but this is enough to give you an idea not to be hasty in making a deal to sell your timber. You might be given an offer that seems like a lot of money, but check into it.

## Wood Heat Quarterly

The best aspect of the current resettling of the countryside is that so many of the settlers are intensely spiritual and recognize the depth of the archetypal relationship of man to earth. (That's many, I said, not all.) Such religious feeling for the agrarian life hasn't been manifested since the last century. By now, every state of the union (and many other countries) has its proportion of the new homesteaders. The Number is growing.

Wood Heat Quarterly is Vermont living, simple living, spiritual living. Practical, plain and poetic, all at once. Its articles on fuel supply, meat, soil care, herbal medicines and water witching are mixed in with the philosophy of Kirpal Singh, Wei Po-yang and the Essence Gospel. They talk about the Shakers and the Population Explosion. It's early New England transcendentalism, reborn, redefined and revitalized.

—Hal Hershey

## Wood Heat Quarterly

\$3.00 /yr. (4 issues)

from:  
Lowther Press  
R.D. 1  
Wolcott, Vermont 05680

238 Down Home  
Community

## Pyrotechnics

Homemade fireworks. Dangerous. Fun.

—SB

(Suggested by Gladney Oakley)

Pyrotechnics  
George H. Weinger  
1947; 244 pp.

\$8.50 postpaid

from:  
Chemical Publishing Company, Inc.  
200 Park Avenue, South  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



FIGURE 6d  
A Night Shift Effect



## Philadelphia

In Philadelphia one day I discovered

THE HOW-TO-DO-IT BOOK SHOP  
1526 Sansom Street  
Philadelphia, Pa. 19102  
LO 3-1516

Nice lady runs it, and she seems to have almost every howdy-do-it book ever printed. (I left with books and pamphlets on how to

do a striptease  
upholster chairs  
organize housecleaning  
use peanut butter 100 and 1 ways  
repair a VW)

May I recommend it as a place to look for the out-of-print, or not-much-call-for howtoidoit book.

Judy Rascoe  
Redwood City, CA

## VOLCANO

This very pretty little device, easily made and perfectly safe for use by small children is produced by rolling a stout cone, 3 to 4 inches long and 2 inches in diameter, on a former similar to that shown for sky rocket cones. The tip is cut off so as to allow an opening about 1/8 inch, into which a stout piece of quitchmatch is inserted. A ramming mold is now made from a 4 inch block of wood, into which a tapering hole, of the same taper as the volcano cone, is worked. A case is inserted and rammed with the following composition:

Salt peter	24
Sulfur	4
Mixed charcoal	4
Steel filings	10

A cardboard disk, somewhat smaller than the bottom of the cone, is now forced into the bottom of the volcano and secured with glue.

## American Pyrotechnist Fireworks News

Find out what the other 7-fingered Americans are up to.

—SB

(Suggested by Rainbow People)

## American Pyrotechnist Fireworks News

Pete Colonides, Jr., ed.

\$12 /yr (monthly)

(Includes membership in the Pyrotechnics Guild International)

from:  
Pyro Press  
Box 1202  
Lexington, Kentucky 40501

## AMERICAN PYROTECHNIST FIREWORKS NEWS

A MONTHLY MAGAZINE ON FIREWORKS & PYROTECHNICS

This completes the listing of commercial fireworks Herr Staedtler has submitted as used by the public today in Germany. But a few of his comments on several of them will be of interest. Regarding "Frogs" or "Grashoppers", he says: "One of the most unpredictable and dangerous fireworks and one of the most unpopular for adults, for it is well known, what damages these things can cause. A paper and office supply shop sold fireworks between Christmas and New Year and wanted to try out one of the big frogs. They lit it and threw it out the open shop door and smiled when it blew off, but with the second bang the frog jumped back into the store and on the third bang ignited a box containing several dozen cannon crackers. With the next bang consisting of over 10 kilograms of fireworks going off and destroying the whole shop.

## Kinnikinnick

Available from: AMERICAN INDIAN TOBACCO & ENTERPRISES  
Lamination Mountain  
U.S. Route #5  
Meriden Connecticut

Write to: Tall Red Oak

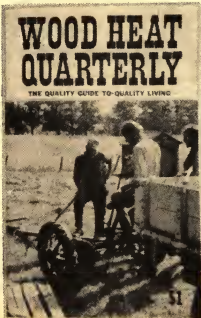
Real and authentic indian tobacco, several types for different tastes. I haven't tried rolling any in paper yet, but the wet pipe might do it if cigarettes are your bag. But, the stuff is really for pipes. The Ceremonial tobacco is by far the richest they carry, heavy and black like. Western Plains tobacco is in my opinion the smoothest all round stuff, mostly pure tobacco. None of the tobaccos are aromatic in the white man's sense of the word. Don't smell like mixture 79 or the like. BUT, the Kinnikinnick NON-TOBACCO leaves sold as "Chippewa Straight" is truly like fine. No nicotine for you guys who've quit but long to puff on something that won't send you up. Also, used as a mix with other blends makes the very best smoking Mountain Men of the 1840's—traded very heavily for the mixture called Kinnikinnick. (Algonquian for smoking stuff) that was made best by the Chippewa of Bear Berry Leaves and Red Willow bark and other herbs. It smells like the forest. Sitting in New York, the aroma fills the apartment and for an instant, you're away. It helps. Try some.

Mohawk Blend is already a mixture of tobacco and Kinnikinnick. Northwest Coast tobacco is heavy and minty.

They'll send a sample package of three types for \$2.55 inc. post. If you want the straight non-tobacco stuff ask for sampler number two.

Otherwise just write for their free pamphlet on tobaccos and other goodies.

Chuck Rapoport  
New York, N.Y.



## Earth Flag

A gentleman named John McConnell came into the Truck Store a few weeks ago and said that since all the nations have flags, and the UN has a flag, and states and businesses have flags, maybe there ought to be a flag that's just for people. So he got together with artist Norman Laliberte and one of the Apollo Earth Photographs and came up with the Earth Flag. I don't know if I'd die for it, but it's the first flag I've seen that I don't feel it somehow excludes me. The Earth Flag feels nice to wave.

-SB



Earth Flag with the Hog Farm Bus in Istanbul

## Hear the Sound of My Feet Walking Drown the Sound of My Voice Talking

Dan O'Neill's cartoons sideways my head continually, and I'm grateful. The West Coast answer to Jules Feiffer.

-SB

Earth Flag (11 x 13 inches)  
(3 x 5 feet) \$1.50 postpaid  
\$12.00 postpaid

from:  
"W.E." Inc.  
19 Troutman Street  
Brooklyn, New York 11206  
or WHOLE EARTH CATALOG

## The Country Bizarre

A hobby-like publication from England of country hints, poems, recipes, swaps.

-SB

## The Country Bizarre

Quarterly

from:  
Bizarre Acres Publications  
1 School Cottage  
Cliffe Rd., Frindsburg Extra,  
North Rochester, Kent,  
England



Paper

The other day, while cruising around Bizarre Acres, I came across a recipe (7) for making paper. Now at first, the thought of slogging over some soggy pulp to make a few sheets of paper a dull experience but just think how nice it would be to paint or write on paper that has been produced and prepared by your own hands.

EQUIPMENT: A Stanley knife or something equivalent with which to chop up pieces of wood, one large saucepan (a pressure cooker would be better but don't worry if you haven't got one) and a rolling pin.

INGREDIENTS: Quantities of bark, pine or spruce (there's no need to hack down a tree because branches and twigs picked up from the ground will do just as well)

METHOD: Cut the wood into pieces for easy handling, remove the bark and chop into small chips. Place these chips into the saucepan, add sufficient water and boil until they have been broken down into fibres of desired length. Be careful not to let the saucepan run dry. (For the owners of a pressure cooker, cook at 15 lbs pressure). After a few hours you will have a fibrous cellulose. At this stage, if you fancy a coloured paper, add a dash of a non-toxic dye (a vegetable dye is preferable as its non-chemical) and stir gently.

Drain the mixture carefully, roll out into the thickness you want and dry over an even heat to remove the excess moisture. When you're satisfied that the sheets are dry enough, roll into reels and leave to stand. You now have a fine matt paper ideal for all your purposes.

Should you want to work on hand-made paper but find it awkward to get things together, you can always buy some from Paperchase (half way up Tottenham Ct. Road) for about 4/6d imperial size or from Kettles 127 High Holborn, WC1, near the Art College) at roughly the same price.



an Ode to Goddies boy, by Dan O'Neill



Hear The Sound of my Feet Walking  
Drown the Sound of my Voice Talking

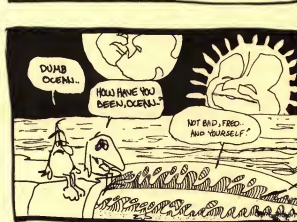
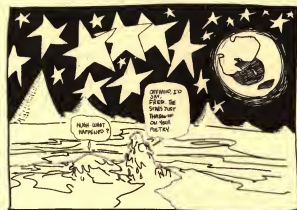
Hear the Sound of my etc.  
Dan O'Neill  
1969, about 80 pp.

\$3.95

from:  
Glide Urban Center Publications  
330 Ellis Street  
San Francisco, California 94102

or WHOLE EARTH CATALOG

\$3.00



## New Life Environmental Designs Institute

Access information and to-order research on alternatives. A catalog.

-SB

New Life Access Catalog

\$8 /yr

from:  
New Life Environmental Designs Institute  
Box 648  
Kalamazoo, Michigan 49005

## The Green Revolution

Seems to be the grandmother of the alternative culture newspapers and magazines. She's spy (been publishing since the '30's) and always has lively articles (written by Mildred Loomis and a young and young at heart staff). Wears simple, functional layout, newspaper format. Nothing called "news," though, just in-depth stories that are relevant. Latest issues have dealt with massage, pig slaughtering, rescuing trees, planting trees, defoliation, dandelions and water wheels. They're always promoting the green revolution, the return to the land.

-Hal Hershey

The Green Revolution

\$4.00 /yr. (monthly)

from:  
The Green Revolution  
Route One, Box 129  
Freedland, Maryland 21053



## OFFING THE PIG

by Larry Lack

Last Saturday we lovingly liberated Ron's soul from his well-developed body. The previous day we'd transported his little sister, Laura, to a neighbor's farm so she wouldn't have to witness her brother's demise. She will remain at her new home for some time, making babies.

Ron and Laura, named for the couple who point the way in Mildred Loomis' "Go Ahead and Live," were Heathcote's pampered porkers, held in highest esteem by the entire community.

I chose to kill Ron myself because I strongly felt that all meat-eaters should come to terms with the killing their diet requires, and should assume moral responsibility for that killing by doing it themselves whenever practical.



## THE GUIDE

"I thought you was a cow," said the man with the light on his cap. It was a coal miner's hat, with a burning carbide lamp on the front. "I heard you was back yonder and told myself I said that's somebody's old cow got out."

"I thought you was a ghost," said R.D. The miner laughed. "Well now, I could have thought the same thing about you. But I've walked this road many a time at night and I learned a long time ago it's always better to tell yourself it's a cow instead of a booger."

The miner laughed some more and then set out walking again, and D.R. fell in beside him. If the miner thought it was odd that D.R. changed directions to go with him he didn't say anything about it. The miner acted as if it was a common thing to run into people on that road at night. He was perfectly at ease and confident in his direction, and when his right leg passed away D.R. was glad to be beside him.

"What are you doing out here tonight anyway?" asked the miner.

"I'm trying to get to my uncle's place in Finley County," D.R. said. "But my bus quit on me up the road here a ways."

"You a bus driver?" asked the miner.

"It's a," said D.R. "One of those Volkswagen vans."

"Oh yeah," said the miner. "They've got a lot of them up in Dayton."

(continued)



*Paul Krasner approaches every moment in his life as a potential source of humor and moral dilemma. He is seldom disappointed. Neither are his readers.*

Far away I could hear the roar of the falls. Catastrophic and gibbering I rose to the rear, also. But I was not up. We were in a final knoll and awe. Natural fuckin' wonder Jim! The majesty of all that water flashing and crashing like a moving pot. Without camera or guard rail or tour guide or beer can . . . not even the plastic music that pervades most national scenic parks.

This place was special because you had to earn it. Here come Bonnie Jean and White rabbit and David LeBruean all wanted from the walk. But the falls fixes all. Quivering with dying sun shouts rose and orange, rusty like the lord's own snit she set us down to worship while the sun sunk into sleep.

Let's take a quick look at the blackboard. All us earth people are holding hands in a circle. Whether we know it or not. We are all dancing and chanting and making our own individual sound which makes up the whole racket of life. Now somewhere along the line the circle turned in on itself so the folks in the middle are squished and screaming like hell. Maybe that's where Hell is . . . in the middle of that circle . . . Hellshima . . . Daboo . . . Vietnam . . . Believe . . . just close your ears and you can hear 'em. Now what we can do is help relieve the pressure by absorbing a taste of the tug. Pass it up. Trust your neighbor. Trust your trust. Practice makes perfect and everybody wants to be practice. Open the whole thing up so everybody's comfortable. Take a deep breath and start all over.

It gets real cozy in the center when everybody's watching out for everybody else like at Yale University. In the middle of all rock and roll my brother-in-law let loose 5 live frogs . . . on cue . . . I grab a hunk. "Don't anybody move! Some nut has just let loose 5 live frogs!" And the buzz was . . . like looking for jumping contact lenses but we brought 'em back alive. It was a calculated risk and it worked.

Later we all laid on the floor with his head on her tummy and her head on somebody else. Not freaky at all but warm and snug. After a while I asked to be passed around. Over the top of the pile. Everybody lend a hand . . . and I'm skimming along at a pretty good clip and it really fits snuff. Then we went Tucker alone. The baby of Barry and Moe. He's maybe two and bald like the Buddha. Talk about total attention. Hand over hand . . . it was really quite grand with Tucker on top of us all. We can fly with the help of our friends.

## The Long Song

It saddens me that we have never been able to make our times of functioning together really sing a long song, though maybe we are singing a long song that is more subtle than I can grasp—sometimes I suspect this, but most often I think that the subtle song thought is a bunch of shit and we're really all raving and lost in different parts of the woods. I've been in the nice-smelling pine trees in a house I've built and have a nice garden and animals and have clean streams and rivers and lakes and the hills and forests and congenial friends nearby and etc. But maybe we'll all live in plastic 21st century or maybe we'll all die.

## Directory of Hotlines, Switchboards & Related Services

*The accessor's accessor. Hotlines and the like are invaluable services. Support your local ones. If you're starting one, this is a good outfit to get in touch with.*

The Communication Company  
1826 Fell St.  
San Francisco, CA 94117

The Communication Company has available consultants with experience in the following areas: Switchboard/Hotline crisis and information telephone services; Free Clinic/community health centers; Family planning/Problem Pregnancy/Abortion counseling and referral services; Runaway House/Juvenile social and legal services; Food, housing, art & crafts, day care, and other co-ops; newspapers, radio, television, filmmaking, and other community-oriented media projects; alternative education projects and free schools; Church renewal and reform movements; religious counseling, drug counseling training, and several other areas. We will attempt almost anything.

ERIC HOFFER IS A TRUE BELIEVER



**The Realist**

The Case of the  
Cock-Sure Groupies

by Eric Hoffer

The Trial of  
Able Hoffman's Shirt

by David Newman

**\$3 /yr. (bimonthly)**

from:  
The Realist  
595 Broadway  
New York, N.Y. 10012



The Realist  
Paul Krasner, ed.  
\$3 /yr. (bimonthly)  
from:  
The Realist  
595 Broadway  
New York, N.Y. 10012

Plaster Caster samples: Jimi Hendrix (#00004, 2/25/68); a friend from school; fellow student; Noel Redding (#00005, 3/30/68); Don Ogilvie (road manager, 5/5/68).

## All Watched over by Machines of Loving Grace

I like to think (and  
the sooner the better!)  
of a cybernetic meadow  
where mammals and computers  
live together in mutually  
programming harmony  
like pure water  
touching clear sky.

I like to think (right now, please!)  
of a cybernetic forest  
(filled with vines and electronics  
where deer stroll peacefully  
past computers)  
as if they were flowers  
with spinning blossoms.

I like to think (it has to be!)  
of a cybernetic ecology  
where we are free of our labors  
and joined back to nature,  
returned to our mammal  
brothers and sisters,  
and all watched over  
by machines of loving grace.

## check one:

☐ **BAG!**  
☐ **WHIMPER**

Sleeping through our decadence in the guise of insight come the totally related sciences of responsibility to pass on this book choice: *Efficiency in Death* (Harper & Row, \$15.00), a documented analysis of 105 ordinary business firms that have manufacturing and assembling anti-personnel weapons for the Department of Defense.

Naturally, this suggestion is offered purely as an amoral tool. Does a blunt instrument know whether it's hitting a head or a nail or many more than the *Ching* takes its coincidences to be taken personally?

"Freedom's just another word"—Janis has taken her chants on that great Mercedes-Benz in the sky—"for nothin' left to lose."

—Bobbie McGee

Now a courtroom will only hold so much. The primary job of the habeas and the law of evidence is to keep too much from happening. "We don't want any of that in here." But if you fill it up to zilch, stealthily, using the rules of evidence like the zen rules they are, you can fill it too full, just a little. Then there's the thing which can be done: the right cough or a certain question. . . . Overload. Makes it harder for judge and jury to think along their old rut. (Moral: even if you blow up the courthouse, sooner or later, someday, goddamnit, you're still going to have to blow the judge's and jury's minds, else it ain't revolution. . . only more bullshit. I'm sorry to say.)

There is another thing which can be said in a couple of ways. Bob Dylan's is the nearest: "To live outside the law you must be honest." Inside the courtroom it reads, if you lie you had better be telling another, truer, truer. Shucking and jiving won't do, for justice may have nothing to do with what goes on inside a courtroom, but it has everything to do with the people who walk in and out.

This one can't help but be a little corny when it's said; that's why you can't ever come out and say it. Underneath the thing is a ritual: we don't the garb of judge, juror, prosecutor and defense lawyer and become possessed, dancing out justice. The dance now is become demonic and monstrous and just a bit incredible. Maybe only just maybe you can reach out and touch—that being no part of this particular dance-another dancer; or even a look of regret, as when two persons who wanted so much to meet, meet.

## The Last Supplement

*The March 71 Supplement to the Whole Earth Catalog was edited by Ken Kesey and Paul Krasner. I've refrained from copying much of my material for this LAST CATALOG because The Last Supplement is really its own publication, valuable by itself. Kesey has more writing in it than has appeared anywhere since Sometimes a Great Notion. There are sundry good articles, particularly Jim Wolpman on law, Chico Scott on feet, Paul Robertson on lute, Paul Krasner on gas. The Bible and 1 Ching reviewed by Kesey. R. Grumb cover. Not your usual comic book.*

The Last Supplement  
1971; 128 pp.  
Ken Kesey, Paul Krasner, eds.  
\$1.00 postpaid

from:  
WHOLE EARTH CATALOG

The Realist  
595 Broadway  
New York, N.Y. 10012

## WINTER SOLDIER READING TOOLS

Here are some books highly recommended for your private consciousness-raising sessions:  
"Revolutionary Non-Violence by Dave Dellinger-mortality reports that should be required reading in all high schools, colleges, communes and barracks."

"No More Lies by Dick Gregory-the truth about American history (and be sure to hear his album, Frankenstein)."

"Winter Soldier is Powerful indeed by Robin Morgan-a collection which provides the kind of inspiration that transcends gender."

"How to Talk Dirty and Influence People by Lenny Bruce-an autobiography of the funny prophet which makes you wonder what he'd be saying if he were alive now."

"Johnny Got His Gun" by Dalton Trumbo-my personal Bible.

—p.k.



Say, for example, there is the Light, and also the Way, the Prayer and the Action (and that, perhaps, the Way does not necessarily move at all times toward the Way) then we need tools in two areas. The Bible is, for me, a tool of Light and the Ching is most practical day-by-day/life/day tool of the Way. The oracle works for the cybernetic, getting principles that when you stand at the free-flow line that the information concerning the future and distant relationship and outcome of ball-and-basket is contained in your physical state at the moment of the shot. We always know down in our cells which fork in the road to take but the knowledge is usually not permitted audience in the right-angled regime of the courthouse of ego and attachment that we recognize, in a kind of diplomatic dither, as our consciousness. . . . ("The cells say you get a lotta useful information. Captain, but great scott! you start listening to advice from that mob and the next thing you know they'll be demanding voting rights and vacations in Atlantic City and plasma pensions and god only knows what all. . .") so we are sometimes forced to rudely bypass the red-tape media garble of our city hall for some grassroots opinion. So we give the Ching a ring. Of course we can't stop the boys in the smoke-filled roundtable from tapping our line but then neither have they figured out a way to stop the call so we toss the coins and figure, What the hell; go ahead and listen, Captain. You get good advice from the Ching even when you're eavesdropping.



## Rolling Stone

Primarily an emergent music trade magazine, it has expanded to be the dominant newspaper to its *Generation*. The music information is still there, and so is dope notes, lengthy thorough reports on Generational heroes and events, and no-heavy-ax-to-grind-yet accounts of political occasions. The Stone's editorial standards, both on writing and graphics, are refreshingly high, and Wenner and crew have good ideas—which may save them from the cramp that Graham and the Fillmore got into with similar success in the same high-energy field.

—SB

## Rolling Stone

Jann Wenner, ed.  
(bi-weekly)  
from: Subscription Department  
\$8 /yr. U.S.  
\$12 /yr. Canada  
\$14 /yr. Overseas  
Rolling Stone  
749 Brannan Street  
San Francisco, CA 94103



Spaces  
Larry Coryell  
Vanguard Apostolic VSD7558

Spaces features John McLaughlin along with Coryell, and it's a great player's dream. Both guitarists have a strong grounding in

## Funny Smell Hists Halls of Finance

BY MAITLAND ZANE

SAN FRANCISCO—Forty-five years ago in the Financial District it was hip to carry a silver hipflask and know a good bootlegger. Today, booze is for the over-40s and the younger yuppies brag about the supergras their connections laid on them last week.

"What do you do? I don't know but I do it every day. Why do you do it? I don't know, but I know I do it anyway. I do what I do indeed? I do. I do what I do every day. (Laughs.)

I do what I do. I am what I am. We are what we are. We do what we can."

—Bonzo Dog's What Do You Do?

## Friends

This is the British equivalent of Rolling Stone (derivative: for a while they were together, then severed). It has some kinds of items we've seen nowhere else, and that's welcome.

—SB

Listen, Hippies, Look, Wake Up. You are being too hip. So you've taken your tabs of 500 microgram Orange Golden Sunshine Purple Scream and you reckon you know it all, no-one can teach you anything, you got the power of Levy, an' yer fat smiles an' yer Biba dresses an' yer seven-kiln smilies an' yer long lervly hair just gotta turn the natives on. Will you wear that smile right through your five year jail sentence in Malaga, Ezerum, Bombay, Tezoun? Will you grin as they stamp something strange in your passport (pity you never learnt the language and can't understand it), will you hand them a flower when they try to rape your dopey girl friend who used to sunbathe naked on the roof and say "fuck what the neighbours think, a bit of it won't kill them."

## United Kingdom Whole Earth Catalogue

Every issue of Friends (above) has 2 or 4 pages of Whole Earth Catalogue U.K., which is pretty good, well-reviewed access-to-tools in England. No price for cumulative catalog yet. Edited by Colin Moorcraft.

—SB

## WHOLE EARTH CATALOGUE BRITISH EDITION

## Organ

Organ has the distinction of carrying new kinds of articles, new subjects, and just new slants. That's a tough one to sustain, but editor Van der Leun has no other plans. (Editors who don't quit have my personal sustained applause; they live like Sisyphus.) This is the kind of publication that other papers copy graphics and ideas from.

—SB

## Organ

Gerard van der Leun, ed.  
\$5 /12 issues  
from: Organ  
Box 4520  
Berkeley, CA 94794



"I" life: a game to be played for all it's worth."

## Friends

26 issues — \$14.40

from: T. F. Muth & Co.  
305 Portobello Rd.  
London W10, England

Wake up. Stop carrying your plastic hip culture round the world. Fortmerrera used to be a beautiful island of sleepy farms and white-washed houses. This summer it was like the carbon-copy of the main drag in any big Western City. Flashy boutiques full of ugly clothes, bars full of freaks basking bongos long after the owner has asked them to stop, everyone playing the same dreary games they played in Finch's bar or the Fillmore East. Ask the local people what they think; they'll rather have mid-middle-aged German tourists who spend money than a load of penniless bums who steal from them and stir up the police while trying to turn their paradise into a psychedelic circus.

Dylon  
for answers to dyeing questions  
write to:  
Annette Stevens,  
Consumer Advice Bureau,  
Dylon International Ltd.,  
Dylon Works,  
London SE.26

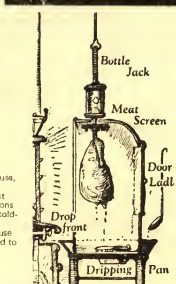
Dylon make ultra-cheap, easy to use, effective dyes. They come in 30 different colors and work on just about any fabric — including nylons and plastics. The range includes cold-water dyes (good for bathed) and liquid dyes (which are ready to use after they have simply been added to hot water).

The Organic Food Service  
Director of Organic Growers & Producers  
1/2 (in stamps)  
from: The Organic Food Service,  
Aisham,  
Churston Ferrers,  
Brixham,  
South Devon.

L. RON HUBBARD CRUISES THE MEDITERRANEAN IN HIS YACHT APOLLO AT THIS VERY MOMENT. HE IS THE CLEAREST OF THE CLEAR. HIS OWN GROSSING MORE THAN \$75 MILLION A YEAR, IS COMPLETELY IN THE CLEAR. RON IS HAPPY. HE KNOWS THAT IF YOU LIKED HIS SCIENCE FICTION, YOU'LL LOVE HIS RELIGION.



At the core of Synanon is the Synanon game. The rules of the game are simple: straight forward and inviolable; no physical violence or threats of physical violence, no drugs, and, most recently, no smoking. These plus the rule that no one leaves the game until it is over are the only ones by which the players have to abide. Anything and everything else goes. Literally nothing is sacred. From these rules and the game itself comes the Synanon life style.



The G.F.S. Directory is continually growing and is produced once every one to two months. The idea is that you flick through that list, find your nearest grower and then go and call on him and collect what you want — there thereby cutting out the middleman. A good idea. No charge (other than stamps to cover postage) is made to eaters or growers. If you're now someone who grows, organic food make sure you're in this list.

"Oh, come on, mother," he muttered. "Not now. I haven't got the energy."

"Yes, Now," she said. "You've always made me feel a little ashamed whenever I criticized you, but you're not perfect, you know, and I've decided to speak up rather than let resentment grow inside me any more. You can take this any way you want to. The only time we see each other is when I invite you to my apartment. It never occurs to me that I might like to be asked out to dinner sometimes. Let alone one of your parties. I like being around young people. But you cut me off. It's not fair. I feel exploited, for example, bringing the borcht with me this afternoon, as much as I enjoy cooking for you. Can you remember the last time you took me out anywhere?"

What else could Leo say? "You're right, mother, absolutely right and I apologize. I never thought of it that way before. How about dinner next Thursday?"

"I'm busy Thursday night." She drew herself up straighter, and continued with increasing confidence. "There's more honesty in the air than ever before, in my lifetime anyway. It's simply great the way people are speaking out against injustice and prejudice... blackwater, women's liberation, gay liberation... people are no longer staying silent and neither will I. As wonderful as youth is today, they think they have a monopoly on the truth."

"Young people tend to discount both the interests and the opinions of elderly people. I will no longer stay silent against this form of racism. I'm thinking of starting a movement for elderly people's liberation."

Leo went over to her, kissed her on the cheek, raised a right fist, and said: "Right on, mother."

She laughed: "Up against the wall, son."

Michael Zwerin

## Catalyst

Classified entries of poets, painters, musicians, filmmakers, theatre groups, etc., etc., primarily in England, but not exclusively. Nothing exclusively.

—SB

## Catalyst

Jos Tilson, ed.  
approx. \$3 /yr (5 issues)  
from: Catalyst, A.I.R.  
71 Stoney Green  
London E. 1  
England



D.R. asked the miner if he lived in Dayton. "Off and on," he said. "I use to work at Frigidore but they laid me off last year and I ain't been back. I told my wife I said 'I'm going to be unemployed' I'm going to be unemployed some place I care about living. So we come on home. We're staying with her people on Lower Elk right now. That's off the Poor Valley road, near the Crab Orchard."

"I see," said D.R.

As they walked on in silence D.R. tried to get a better look at his companion. He was about D.R.'s height, but much stockier. The light on his forehead went out in a jet. From the side it was hard to see his face in any detail. When the miner's face first materialized out of the dark and scared D.R. so, he had seen it from the front, and although he hadn't seen it in any detail then either, it had appeared to D.R. a very old face, weathered and deeply lined about the eyes. He had looked vaguely like an old Chinaman, but now from the side he did not look like an old Chinaman at all. He looked very young, in fact, and he certainly looked young. They'd only walked a quarter of a mile together but already D.R. was having to work at it to keep up. After they walked on in silence for perhaps another quarter mile, he asked the man where he was going.

"To join the Happy Peppys if they'll have me," said the miner. "They might not have me. I've got to get much out of them people in town except appointments."

(continues)



## Rags

Never fear, Rags is nowhere near a newsprint version of Glamour, so don't be put off by the fact that they talk about fashion sometimes. All they're really doing is talking about wearing your insides on your outsides. All of us feel that fashion can be superficial, trivial and irrelevant and it is... if you take it too seriously, Rags has zeroed in on fashion as just plain old daily living and they look to the street for people who dig fashion as self-expression and not what-to-wear-and-why-not. They know that nobody should have to think twice about clothes or how they look except as a whimsical, trippy kind of safe-value. Put on what you feel and you can't help but look beautiful. They print some good how-to articles, so you can pick up on all sorts of old and new recipes, beauty and otherwise, to make you feel better by doing it yourself and enjoying it all too. If your insides are being energized and revolutionized and beautified then those ole familiar outsides just have to be getting better too.

(Reviewed by Barbara DeConia)

## Rags

Subscription: \$7.50 for 26 issues

from:  
Rags  
10 East 20th Street  
New York, N.Y. 10003

## Make It

### Make It

Issued quarterly, first issue, Fall 1971.

How to obtain, build, repair, recycle and renovate what you need. Dedicated to survival, economy and conservation.

Price—\$3.00

Box 526, Old Chelsea Station  
New York, N.Y. 10011

As soon as possible, we would like to have requests for information and projects you want.

We will also pay for suggestions and for articles describing projects you have completed.

The idea behind the periodical we're planning is pretty important, we think. Here's how it got started. I've been repairing, restoring/renovating and building things from scratch for about 25 years now, and was interested in it for a few years before that. I'd try to keep it short, but things required include small and large appliances like washers, refrigerators, small engines, can of course, restoring and film studio gear, radio, TV, radio and TV station gear (I have the FCC license), farm implements, steam engines and many more. I've built boats including all plumbing, wiring, finishing and cabinet making, made Portland cement and bricks from clay and limestone, chemicals, jewelry, gemstones, tape recorders, recording studio consoles, radio studio, pattern wheels, tools of all kinds, freezers and refrigerators, underwater photographic gear and lots more. I have considerable experience as a machinist, carpenter, mason, electrical and electronic engineer/technician, tinsmith, blacksmith and technical writer. My buddies have similar backgrounds.

I tell you this, not because it's some kind of a big deal... I've found that determination can do practically anything they want if they take enough time... but rather to let you know where I stand and to support my belief that anyone who plans to publish or teach should know about the subjects they're talking about. And it isn't enough to have learned in an academic sense only... that may be enough for purely academic subjects, but practical subjects need to be supported by practical experience. A good way of learning a new subject is to tie it in with the related knowledge one already has and experienced... a craftsman can therefore learn in a very special kinetic way... by analyzing the subject as a job that will be executed to yield a finished product. If you project yourself into a job, you can predict what the order of the steps should be and what problems might come up. I'm not putting down books or even abstract or academic thinking, but when I pick up a book that claims to tell me how to do something, it should really work. It's happened to me and to everyone I know and it may be happened to you, too—that after finding that a project from a book was work and checking it out very carefully, you discover that the thing couldn't possibly work no matter what, because the basic concept is wrong. It becomes clear that the dude that wrote the book didn't try out the project, didn't have enough practical work behind him to evaluate the project, and was a little too eager to tell the reader that his project was purely theory and therefore speculation. No good. You learn to end up with a working thing and instead you find yourself in a research project.

Our plan is to describe projects that have been done so that the idea is tested and the usual problems involved in execution can be avoided in a step-by-step procedure. We'll work up a list of the projects ourselves, and we'll print articles from readers (paid for, of course) provided they are tested. We'll also run some abstract things for our projects, but these will be clearly identified. The project articles will be as concise as possible, but complete enough that a newcomer to the subject can be sure that it will work if done carefully. We want to use a kind of abstract writing you find in survey type books where you plank down 10 or 15 words and then get on to the actual details. I think it's essential when you look at the subject. Finally, we'll tell how to make barrels, using the same name as cooper doesn't use, which are more useful for people who want to make a barrel right the first time rather than making a lot of scrap ones as the cooper does in his apprenticeship. This will apply to all of our articles.

Max Pepke

242 Kindred Community



## CAUTION: RAILROAD RIDES MAY PULPIFY YOUR HEALTH

'Twas on the stretch of track between Starkey, Nevada and Utah that I began to learn the dangers of the rails.

I had been riding in an empty coal car with a floor that consisted of six large trap doors. Several dozen miles out of Starkey I picked up my pack and moved to another side of the car. A few seconds later there was an enormous clatter. The door I'd been standing on had fallen open.

Sitting or lying down in my cozy coal car was impossible. The freights have no shock absorbers, a fact I'd never noticed on slower jaunts. When a train hits sixty miles an hour, the fool who attempts to sit is rewarded with a smashed ass.

## Canadian Whole Earth Almanac

son of whole earth meets the mapleleaf mysteries and supergrass, breeds with them, and gives birth to a beautiful babybeaver catalog, that's the script.

—jd

Canadian Whole Earth Almanac  
Tracy McCallum, editor  
1970/122pp.

single copies \$3.00

subscription per year: \$9.00

from:  
The Canadian Whole Earth Almanac  
341 Bloor Street West  
Toronto 181, Ontario, Canada



A brush dam

## Whole Australian Catalogue

The first issue of The Whole Australian Catalogue should be out early in 1972. At present we are negotiating with a publisher; if they print it, they will distribute it in the U.S.; if we distribute it, you can get it from us at:

Source Books  
121 Collins St.  
Melbourne  
Victoria  
Australia

The price will be about \$3.00.

Purpose: We think of Australia as one of the last frontiers. In a country so vast, the possibilities for learning, experimenting with new ways of living, and discovering untold land and resources are still great.

This catalogue is for people who live in Australia, and for those who are interested in or who want to immigrate to this part of the world.

It is a guidebook to what is available here in the way of tools, materials, information, books, land and whatever else can help us to create a new and better environment.

Contents: Dwellings; adobe; ferro cement; bark huts; Land: zoning; price; availability. Craft: weaving; ceramics; bush crafts; Aboriginal; myth; culture; survival. Learning: experimental schools; useful tools. Ecology: conservation activity; use and misuse of land. Communications: music; film; TV. Flora and fauna: Australian native plants; animals; edible plants. Food: growing your own; beer and wine making. Immigration: jobs; acceptance of foreign credentials. Industry: access to materials for building crafts. Communities: who, who, who they're doing. Survival: in the bush, on land, at sea, in the air; outdoor activities.

Meanwhile, we might be able to tell you how to get help for those who are thinking of coming to Australia.

Immigration: If you want to get a visa for travel only, there's no problem. Getting one for permanent residence is another thing. It can take 2 or 3 months, so you have to be patient. Also, they check lots of sources: your background, past activities, etc. Sometimes they refuse without telling you why.

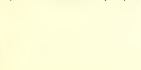
Memory Holloway  
David Matthews

India Trading Co. Ltd.

113 Orchard Rd.

Singapore 11, Singapore

Carries a complete line of all geographical areas in Indian cookery. Spices, herbs, oils, salts, chutneys, and more. Free list upon request.



## Atlas and Gazetteer of Canada

\$5.00

NOTE: BANK TO BE CLOPED AT LEAST 10-11

From:

Queen's Printer

This has to be the definitive book of Canadian maps. It comes somewhere between the gas station variety (and unbeatable) local topographical maps. The scale is 1:2,000,000 and shows township lines along with all cities, towns, villages, and even most unincorporated communities. 1 p to date.

## Maine Times

John Cole is not reporting on the whole earth. The state of Maine is his beat, and the results of his focus are obvious. Maine Times folded the same year Maine Times soared. Cole's weekly circulates all over the U.S., but his paper is primarily about Maine's ecological problems. Maine Times is revolutionary in that it's a straight business, dependent upon circulation and advertising revenue like most publications; and yet, it takes no shit. If the Times' editorial policy offends a potential advertiser, that's the advertiser's problem. Aside from its good work as a conservation news medium, the Times does a favor for us all by proving that power does not always rest in the hands of sons of bitches. The Times has been a central force in uniting Maine's lonely, isolated little voices for conservation into a tough political fist. It aint hippies they're uniting, and Maine Times aint a hippie newspaper, although the Freak spirit obviously dwells in the hearts of these newspaper pros. The Times lives at that difficult but special meeting place of overground and underground, with no apologies in either direction. So do a lot of other people, apparently. Maine Times circulation is climbing. Let's hope it's true, that as Maine goes, so goes the nation.

—Gurney Norman

## Maine Times

John N. Cole, Ed.

\$7/yr

from:  
13 Main St.  
Topsfield, Maine

## Natural Life Styles

The Whole Earth Catalog never became what it started out to be. Natural Life Styles comes closer. They take the time and (believe me) trouble to do a full job on subjects, like a long illustrated rambling talk with Euell Gibbons, a thorough letter on New Zealand, a comparative list of outdoor suppliers, and so forth. A hell of a lot of information for a dollar. Layout is funky but not obscure. Hand in three flaks. Stay loose.

## Natural Life Styles

\$3 /yr

from:  
Natural Life Styles  
53 Main  
New Paltz, N.Y. 12561

Alpine Designs, formerly Alp Sport, PO Box 1081, 3235-45 Prairie Ave., Boulder, Colorado 80302, is a small company gone big time. They make excellent packs, pack bags, sleeping bags, tents and down clothes. Straightforward presentation with closeup of black and white photographs that give you a good idea of how the equipment actually looks.



Mature dandelions can be trimmed to the center crown for delicious steaming.

## Vision, With Rap

I like your collective prose and the selections, under-the-skin communication. So therefore I feel called upon to criticize no matter what your reasons for stopping publication, even of the most personal sort! I'm a new convert, and we are the crankiest!

Anyway, here are my suggestions. The catalogue and the truck store, truly beautiful in their other tools beside books. We need to arm ourselves with knowledge and a clear mind to perceive, among other things the applications of knowledge. But reading is a limited way to understanding. When I came to the truck store, impatient to get there, I'd expected to find tools, models, materials, a community making a new design for Stores, that is—Information Centers, a place where you launch a new beginnings from. I would've like to see displays such as macramé and weaving, wire sculpture, plus the kind of information you're producing, what? maybe lights and color machines, or tape music, or better yet, if we are speaking of new communities, running a motorized pump, that someone there has devised, with only available materials and his imagination. And so on. I suppose you'd need more room, but that might be exciting too! Could you go a bit farther out, close enough to urban centers, but still on the land itself, could the shape of the store change often—could people design, out of materials, or plentiful materials, a changing line of Stores. I'd like to make a huge canvas shape, for instance, having it bulge and corner and dome where needed, held up by plastic rods, or aluminum poles—or another of screws, driftwood and scrap metal. How about a small, shifting community, as people moved outward on their spiral, others come in who were interested in the Whole Earth concept, and also in spending some time in devising needed tools for where the truck store was at, putting together solar water heaters, hand made cowboy horse gear, I'd like to have a small organic garden to feed this Whole Earth Truck Store Family. I think you have a lot of very committed people out there, who'd like to come together to really do things, solve common problems and learn. I think that this should happen in a real situation, there are many free university type courses, dealing well with theory and practices. I think a new book store could perhaps offer information in a more real way. That a small staff—or group—could work out many solutions to new communities, to ecology and survival. The customers to your store could really be involved in these solutions, checking them out, offering their own, would in fact, be as neighbors concerned with the success of problems solved, not just in theory. The catalogue could, if publishing were continued become more as the supplements, be indexes of real experience (as the story of Libe, and Gary's Four Changes).

## Mother Earth News

Takes you a little further down the road Whole Earth Catalog has pointed out; with complete "how-to" articles on subjects like permacorn leather, horsehoesing, free-lance cartooning, superpublishing and copyrighting, getting into Canada, recycling schoolhouses and dandelion wine.

The entire second issue of TMEN was devoted to a reprint of The Have More Plan, a 1944 get-back-to-the-land piece that touches on just about every problem involved in setting up a self-sufficient homestead on a few acres.

—Hal Hershey

## The Mother Earth News

\$5.00 per year (6 issues)

from:  
The Mother Earth News  
P.O. Box 38  
Madison, Ohio 44057



I mentioned earlier my own feeling of diet imbalance, and I know that this is not your responsibility; there are groups out in the "wilderness" learning ready to go with. There are many more people getting ready to go out, and not quite knowing how. I suppose we will all find out when the need hits us, soon enough! I also feel you've done a lot. So much, in fact, that I would like to see you continue. If I haven't totally turned you off by my Virgo-Vision, perhaps we can together some time and start dream theories.

Thank you for creating the Whole Earth,

Sincerely,  
Ann Hatch  
San Anselmo, CA

I'm impressed with these ideas and moved by the vision. I expect it's not all that individual a vision, either; many of our readers and customers may have felt vague rumblings along these same lines, not to mention our own state. We did rap with Ann—no indication yet whether she'll go any further with it. We can't do anything to attract or realize this particular vision, beautiful as it is, and still continue the trip into the Truck Store, which has its own dictates (time, energy, direction, money, space, its own meaning, goals, joys, frustrations, tiredness, challenge and beauty. By the same token, there's nothing that would turn us on more than to see it happen. A lot of times, when people say, why don't you do such and such, we say hey that's a groovy idea, why don't you do it? We're doing our ideas and even when it seems a bit much to tackle at times. I dunno, it's always seemed to me that one of the main things the CATALOG says is do it yourself, man. We dig most of the criticisms we get very much, whether or not we make changes around them. What I don't dig is the underlying feeling I sometimes get that we're being asked to do stuff that belongs by its very nature to the head that thought it up, to do it. It would be so much better ecology if some of the mental energy that gets directed towards us were directed instead towards the real and physical realization of the ideas. A lot of visions don't ever get out of the head, and that can be a waste. Some get as far as being down on paper, and that's a beginning. Only! Or get stopped after they've been rapped about, because there's a false sense that something has happened. And again, we really don't mind having visions laid on us. But I, for one, keep wishing folks would realize that we may dig it, encourage it, feed it however we can, but in approximately ten cases out of ten we aren't going to DO it. So, all we can really do is encourage it, let it be on your own self, and you might find out whether it's just a trip, or an idea worth realizing in your own life. I understand more and more why our collective failures so outnumber our successes. It's just very much damned hard to succeed and take the responsibility of the position. Who'd do this one?

—Diana Shugart

## THE MOTHER EARTH NEWS

- ▶ MEAT YOUR OWN MEAT: HOW TO RAISE YOUR OWN MEAT
- ▶ RECYCLE A SCHOOLHOUSE: GET A BUNGALOW FOR \$400
- ▶ MEET YOUR HANDICRAFTS FOR WHATEVER YOU WANT
- ▶ ORGANIC GARDENING: HOW TO MAKE YOUR HARVEST STARTS HERE
- ▶ HOW TO OUTFIT, PUBLISH AND RECORD A SONG
- ▶ SEVENTEEN SPEAKERS ON WHAT RAIN OF THE OCEAN
- ▶ ELVIS BEERS: HOW TO BE A WILDLY SUCCESSFUL HOMESTEAD
- ▶ HUSBANDS FOR THE HANK RESENDER
- ▶ NEW YORK'S "THE CITY" COMING TO A THEATRE NEAR YOU
- ▶ WILD FOODS FREE FOR THE EATING
- ▶ HOW TO DISCOVER IN ALBERTA
- ▶ BACK TAY LAND IN CANADA
- ▶ THE FRONTIER BOO HOUSE
- ▶ MADE YOUR OWN IDEAS
- ▶ MANAGE THE WIND
- ▶ USE MORE WOOD

NO. 5 \$1.00

I suppose the ideal location for a pond would be a half-acre (or larger) gulley or valley with clay soil, located on a gentle, grassy slope directly below a spring or artesian well. All a builder would have to do, in such a situation, is build an earth dam (with a spillway or drain pipe to control the water's depth) across the lower end of the depression and let it fill.

If you've got the gulley and slope but not the spring or well, you may still be in luck. As long as you have five acres drainage for each square foot of water that is six feet deep in your mini-lake, you can build the dam and let the rainwater runoff from the hillside fill your pond. As a matter of fact, you can get by without the gulley and slope. Even if your homestead is flat as a pancake you can still have that "private fishin' and swimmin' hole"... by excavating.

An excavated pond is more work but it's also the most versatile (therefore, most popular) mini-lake. Such a pond can be located anywhere a source of water is available or can be made available. An excavation—instead of a dam—can even be placed in one of the gullies mentioned earlier and, so located, would probably be easier to keep full of water than a dug-out pond on level land. Most valley ponds are at least semi-excavated, as a matter of fact: the dam at the gulley's lower end being constructed, generally, of clay bulldozed out and pushed down from above.

The only minus factor (vastly overcast in my opinion) of an excavated pond is the difficulty involved in draining such a reservoir dug into level ground. I believe, once your pond is stocked, you'll find yourself much more concerned with how to get the water in than with how to let it out. A pond can always be speedily drained with a large pump that can be borrowed or rented if you don't have one of your own.

There are still other ways to get a pond constructed for very little out-of-pocket cash. If you're to be located at least one-half mile from human habitation, blasting is a very reasonable way to remove the dirt. It's not needed to pay for dynamite to move the dirt, earth, either, although dynamite will be used to trigger the blast.

The main explosive element is Ammonium Nitrate saturated with fuel oil. This is the same Ammonium Nitrate farmers use for fertilizer. Ammonium Nitrate is available in two grades available at any service station. A good-sized pond can be blasted for less than ten dollars with this method. Before you try it, however, you should obtain a copy of the booklet, "Blasting Fishholes For Wildlife" from the Wisconsin Department of Natural Resources, Box 450, Madison, Wisconsin 53701.

## Journalistic Opportunity

The big question is: How do you implement a good intention or a good vision or even a good plan? Is the counter culture or a going live up to its name it's going to have to shift from the role of critic to that of producer. It's going to have to produce viable examples of what it's asking for—or else invalidate its discourse. It seems to me that this need suggests a journalistic opportunity that has barely been touched; a great labor of discovering who has made a better what, and how did he do it.

Wendell Berry  
Port Royal, Kentucky



D.R. asked the man what the Happy Pappas were.  
The miner snorted, and spat on the roadside. For the first time D.R. realized he was chewing tobacco. "Standing around for a dollar and a half an hour, mostly," he said. "Make work for them and they'll let you name it." He spat again, then asked D.R. if he lived in Finley County.  
"I use to," said D.R.  
"Who's your people?"  
D.R. said, "The Colliers. From over on Tract Fork."  
"I know Tract Fork," said the miner. "Toward Big Diamond, over yonder past Hardy. Collier, your mother married a Daveport after he died."  
"Well I'd like to know you, Collier," said the miner. "My name's Virgil Amburgey."  
Virgil had got D.R.'s last name wrong, but D.R. didn't feel like correcting him. They stopped long enough to shake hands with one another. Then they set out walking again, and a while later they came to Urey, sitting like a shadow by the road.







At the starting line Hugh Romney mounts his bus.

Nomads



Feverish last minute preparations aboard Further.

# THE GREAT BUS RACE

Winning Time 2:32. Who Won Is Debated.

Aspen Meadows, New Mexico. Summer Solstice, 1969.

Hugh Romney, who mustered this 1000 in this mountain pasture, is announcing the start of the Bus Race and that a couple named John and Mary are somewhere around and must be found because they have the bubonic plague and require inoculation immediately. Everybody's pretty inoculated already; it's the spaciest part of the afternoon. The race was going to be one bus at a time against the clock, but Ken Kesey and others are maintaining that's a chickenshit race. It's got to be all at once.

The buses are Kesey's renowned Further, with a skeleton crew of Farmers aboard, and the Hog Farm's fleet: Road Hog, Hospital Bus, Kitchen Bus, etc. The Motherfuckers' tight little bus is around but not in the race.

Everyone will go one trial run around the course:  $\frac{1}{4}$  mile up the meadow, around the flag, and back downhill to the starting line. Majestically the line of buses staggers up the course. "I don't know about this," says Mike Hagen, "Further ain't got much brakes." The Hospital Bus is stalled half-way up the hill right where it's almost impossible to get around. Reportedly it also ran over a pup tent (unoccupied).

The survivors of the trial run line up. They're immense, these faded colorful wrecks filled with folly. People are climbing off, others are climbing on. It's a test of passengers as much as drivers. The mood is pure: fatalistic optimism.

And it's begun. Road Hog gets off first. Further is dragging. The air is filled with buses and exhaust and din. They wallow up the pasture like berserk pigs. As Further sways past the grounded Hospital Bus disappears over the windshield shouting orders to driver Bucavich. Over there in the bushes the Foot Swam from India is watching it all go by.

Further approaches the flag from the left. The Kitchen Bus with Romney on top is coming around the other way. They intersect, pass narrowly, and ram into opposite hillsides, then rev and back blindly toward each other. Frantic shouting gets them forward again. For a moment the entire solstice is tied in a sweet mad knot at the top of the pasture.

Bucavich gets Further around. The Kitchen Bus is still hung with a rear bumper gouged in the creek bed. Rocket, who's driving, surges again and gets it free. The buses swarm downhill. Hugh Romney's mouth is wide open, his toothless warning wailing down the pasture, "BEEEE CARRREFUULLLLL." At the finish line a thousand longhairs cheer and dodge.

Afterward, at the award-giving argument, Romney is saying, "A miracle. It's a pure miracle nobody was killed." Kesey is saying, "Two minutes thirty-two seconds. It's something to think about for next year."

Further ain't got much brakes.



Barreling toward the first turn Kesey has an excellent view of the rear of the Hog Farm fleet.

The Great Bus Race May Never End

In the pursuit of truth by participatory journalism our reporter at the Great Bus Race drank fluid from a Donald Duck glass. Consequently he was so stoned to function and misrepresented some facts, such as:

\* The Kitchen Bus is really the Just Bus

\* The Hospital Bus is really the Us Bus

(Just Us Buses)

\* The other bus besides Road Hog is The Queen's Midtown Tunnel of Love Bus, and was the one which broke down.

\* Rocket wasn't driving the Just Bus, Bob Redhat (narcologic from Ann Arbor) was.

\* Bucovich isn't spelled Bucovich, it's spelled some other way.

Romney had lost his notes and was starting to make up facts and the reporter sensed that once again truth was drifting. Here are some other accounts. Perhaps they converge.

And in Aspen Meadow above Santa Fe the Great Bus Further lost her silver bell to the Great Bus Road Hog in the First Annual Summer Solstice Great Bus Race.

Ken Kesey  
9 Aug 69 ROLLING STONE

The Great Bus Race

c. 500 yards up the mountain, the same distance down, around a red flag marker and down past the swam's gathering place where they all sit and chant OM.

They're off we get a terrible start, next to last, 5 buses up the hill—Bucko at the wheel picks up steam, passes them all except the Road Hog—bouncing, bumping—we're scared as hell on top—the kids all love it—we lose our bell to the Road Hog—Get the Weather Vain from Just Bus. 2:29 the official record time.

Paul Sawyer

Obviously truth is not to be found in the past, nor likely in the future, next summer, when the buses race from Stonehenge to the Pyramids, maybe. Truth was good while it lasted.

—SB



Tied up at the flag, Romney and Further pass in opposite directions. Pierce bus action is visible on the track below.



A few months later Hugh Romney became his own sequal, Wavy Gravy, who was last seen bussing out of East Pakistan just ahead of a civil war.

Great Bus Race  
Nomads **245**



## Leisure Camping

For group travel exactly nothing beats a worked-over school bus. Cheap, dependable, adaptable, and impressive. This book is the only we've seen on bus conversion, by a family man in Minnesota. It's too thin for \$4, but some of the tips might pay its way for you.

—SB

**Leisure Camping**  
1969; 53 pp.  
\$3.95 postpaid

from:  
Camping Enterprises  
923 Dodd Rd.  
St. Paul, Minnesota

The school bus is a very well insulated vehicle—made of double wall construction, which also makes them very easy to remodel into a motor home. They have large radiators which give excellent cooling capacity in traveling hilly or mountainous country. They are all equipped with excellent heating plants. Most of the 1956 or newer buses have 6 foot ceilings so that you do not have to stoop while walking inside and are very comfortable to ride in.

You will probably get your best buy from a school that owns and operates their own bus lines and they usually keep them in better shape than the buses that are owned by individuals and sold to the schools. From a bus company that takes them in trade from schools as they purchase their new buses. The best time to scout for a bus is in May, June or July. The schools are in the process of taking delivery of new buses for the school year and they are anxious to dispose of the surplus buses they don't have to carry them over to the new school year.

You should also buy a "Motor Minder" for \$8.95—which is a small vacuum gauge that will tell you if the motor is in good condition or not. It tells you if the rings, valves, etc., are good and can be used as a real lever in the purchase of the used bus. It is a very simple matter to hook up to the wiper hose line and hooking it to the vacuum gauge.

The Motor Minder is a valuable asset to your unit and as you can tell when you are driving, the most economical speed and if you are overworking your motor.

If you can buy a 12 to 14 year old bus for \$250.00—his price should be okay, because you will probably put another \$250.00 in it for repairs. A 10 to 12 year old bus should run between \$200.00 and \$500.00 depending on its condition. In any case, \$500.00 to \$600.00 would be your top dollar because if it is perfect the seller would be using it for the purpose for which it was intended.

A good place to find nomad equipment is at the larger marine supply houses. The stuff made for boats will often adapt to land use and is likely to be of better quality. Prices are likely to be higher. Marine catalog also list an impressive variety of pulleys, cable and rope, cymbals, caulking compounds, and other nautical stuff that can be useful.

If you are building your own truck body, round off the front corners of all panels to a radius of at least 8 inches. This radius will give the least possible air drag and consequently the best gas mileage) to a basically rectangular shape. You can make the edges of the body curved easily from sheet metal or mastic and fashion the corners from fiberglass over curved styrofoam. Funky log cabins on wheels are users.

## AAA

If you own a car or if you're likely to be driving one much, an AAA card is worth its weight in battery charges. For \$15–20 a year you get 1. Free Towing, battery jumps, emergency gas delivery. 2. The best up to date maps available for the U.S., plus booklets of camping sites, plus help in choosing travel routes. 3. Insurance discounts. 4. Bail for misdemeanor traffic charges. Our AAA has paid for itself in the first 3 months of every year we've had it.

(AAA offices in every major city.)

(Suggested and reviewed by  
Michael Wells)

## Luger Camper Kits

Luger makes good kits if all you want to do is assemble. You will save some money from a new camper or trailer.

—SB

## Catalog

free

from: Luger Industries, Inc.  
1300 East Cliff Road  
Burnsville, Minn. 55378

Now place fiberglass insulation included in kit within side walls and cover with factory supplied aluminum exterior covering. Covering comes complete with baked on enamel finish and factory formed seams.

## 246 Buses & Campers Nomads



## Roadside Camping

Honda has a new 300 watt generator big enough for lighting and small appliances. It's really quiet, you can talk in normal voice with it running on your table. \$185.00 They make a very nice larger one too that is exceptionally easy to operate and though it isn't as quiet as the small one, it still is remarkably quiet. \$300 watts will run skilaws and pumps. They are reputed to last an exceptionally long time too.

For heating a camper bus or tent there is a small but good silent heater that makes no flames called the Therm's. They are safe and do their job well, but use special fuel that's too expensive for heating for weeks or months. For that job the same company makes excellent propane catalytic heaters for about \$75. The small Therm's is about \$20 at most camping stores.



CLEAN  
BURNING

"ADVENTURER"—  
"30 THERM"  
SAFETY HEATER.

Made of sturdy, lightweight anodized aluminum...no rusting! Our most popular model heater for sportsmen and general use. Ideal for hunting, fishing, camping, small trailers, boats, cabins, camp units, station wagons, planes, engine heating and hundreds of other uses. Operates up to 24 hours on a filling of white gas, camptone fuel or Thermoal fuel. Minimum 3,000 BTU output; 9 1/2" high; 8" dia.; wt. 3 lbs. Color, Hunters Red and Ivory. Suggested retail only \$27.95.

A really good toilet for minibuses and vans. Warm cabin is the PORTA POTTI. It does its job as advertised for \$109.00, and there is no installation chore. The same manufacturer makes nice plastic sinks for \$7.50.



## Thermal Springs of the Western United States

Another over-priced pamphlet. This is a copy of part of a U.S. Geological Survey book titled Thermal Springs of the United States and Other Countries of the World, now out of print. It was 383 pages and cost \$2.75. It is public domain. This photo copy of 37 pages costs \$3.

Nevertheless it's the important 37 pages for local travel. Here are map locations of most of the known U.S. hot springs complete with information on temperature, rate of flow, mineral content, and whether commercial or wild. Some former wild springs are now power generating plants. The publishers claim they will update the book. I hope they don't.

The book fails to mention the plastic ice-water afterlife that awaits those who mess up wild hot springs.

—SB

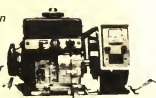
Name or location	Temperature of water (°F)	Flow (gallons per minute)	Associated rocks	Remarks and additional references
Arizona				
Pakoon (Pahgon) Spring, on tributary of Grand Wash, 18 miles north of Colorado River	100	.....	Lava (late Tertiary).....	Ref. 148
See 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000				
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ED 250KI (DC only)  
6V 60W 12V 200W 24V 250W



E300  
AC 300W/DC 11V 100W



E600 (AC only)  
60W MAX 120W

## Honda Generators

used to be that gasoline driven generators were big clumsy oafs, but why honda has begun to do the same thing to the generator that he did to the motorcycle, the company makes a wide variety of power models, most of them being ac-dc at the flip of a switch.

look good for auxiliary power sources, easily carried into about anywhere, fourstroke, aircooled, ten hours per gallon.

—jd

[Suggested by Les Rosen]

## Information

free

American Honda Motor Company, Inc.  
100 West Alondra Boulevard  
Gardena, California 90247

There's been some model changes in the Honda generators. The E300 was \$150 as it changed to E400.

—SB

Camper trucks and buses can be made a lot more comfortable to ride in by replacing the seats with good quality bucket seats out of cars. Most junk yards charge outrageous prices for buckets, but one of the very best seats is from a Renault 8 or 16. These cost as little as \$25 a pair and make a big difference. Get them trucks and all.

Good sunglasses can greatly reduce fatigue and headaches and also save your eyes for night driving. Rayban with g13 grey lenses take out most of the ultraviolet and infrared rays, but pass most of the light for less eyestrain. They also don't distort colors which is nice for color prints. These cost about \$12, but are sturdy shock resistant ground glass with no distortion. They also come prescription.

J. Baldwin  
Pacific High School  
San Diego, CA

## Thermal Springs of the Western U.S.

\$3 postpaid

from:  
Paradise Publishers  
Box 5372  
Santa Barbara, CA 93103

## Airstream Travel Trailer

I've lived in a 22' Airstream with wife and two cats for most of three years now. It's the only high-tech home I've found at all livable, indeed comparable to the way some ocean-going boat owners feel about living on board. The Airstream is an elegant honest design-job. It makes us parsimonious (and conscious) about using water, gas, power. It frees us from owning land, and encourages us to live in wilder places. It is proof from fire, earthquake, floods (drive away) and mice (except what the cats bring in and lose). It's one of the few models I know that doesn't leak. When we travel with it, wherever we go we're coming home. One more month of production and we're hauling ass and house out of here to the desert.

—SB

## Therm'x Heaters

Therm'X catalytic propane heaters are neat, safe, silent, odorless, ventless, hot, and very efficient. The 6000 BTU model, enough for a typical camping bus, will run wide open for more than 100 hours on a 5 gallon propane bottle. (The usual heater of the same rating runs about 15 hours on the same bottle). They light instantly without trickery and regulate nicely to the desired output. Full heat appears about a minute after it starts, is mostly radiant, and feels good. There's an eerie red glow in the dark, but it won't ignite gasoline fumes, for instance. Emissions are very small amounts of CO<sub>2</sub> and water vapor. We haven't had any trouble with the vapor condensing on things. The heaters cost a lot more than the local 9erz and Turner competition, but the Therm'X has the advantage of a positive automatic safety shut-off in case of trouble, and it is a handier shape to install. She also comes in a 12,000 model.

[Suggested and reviewed by Jay Baldwin]

## Mark I Portable Therm'X

\$85 from local dealers or

Therm'X Corporation Inc.  
1280 Columbus Ave.  
San Francisco, CA 94133  
Therm'X Company of Canada  
Box 3003 Station C  
Hamilton, Ontario  
Canada



## Katadyn Pocket Filter

Perhaps these devices would be of interest to some of the people, especially those travelling in tropical countries.

We can vouch for the pocket filter walking through Switzerland, Italy and Yugoslavia—we drank from puddles, cemeteries and feldt markers. Sometimes the water tasted like diluted cough syrup but we derived little or no having an instance of sickness.

This added up to a tremendous saving in not having to look for safe water supplies or carry so much at a time or worry.

Note that the filters only remove biological contaminants from the water— insecticides, herbicides, salt and other chemicals whose size is many orders of magnitude smaller are not filtered out.

Katadyn told us they used to have agent in L.A. but that at the present time the simplest way to order is directly from the factory.

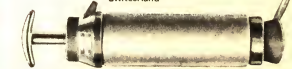
Write to find exact cost including postage and insurance and then send a check. They are a great firm to deal with.

John and Jane  
Rochester, New York

Costs about \$30 (plus shipping), pumps about a gallon in 5 minutes.

—SB

Katadyn Products Ltd.  
P.O. Box 154  
CH-8304 Wallisellen  
Switzerland



Our test was run as follows: The hand operated pumping unit was taken to Missouri River where the packing house waste and sewage enter the main stream. A sample was taken from the Missouri without Katadyn treatment for control. The pump was operated on the Katadyn unit sucking Missouri River water through the unit and discharging it into a sterile bottle. We found this sample to contain no intestinal organisms of any kind after being pumped through this unit; and thus this water, after treatment, meets the standards of the Health Department for potability.

The sample that was collected from the Missouri River without treatment showed pollution of intestinal organisms of all types present in extremely high numbers.

In our opinion, from the result of this test, this process would be very satisfactory for the bacterial purification of water for drinking purposes on hunting and camping trips.

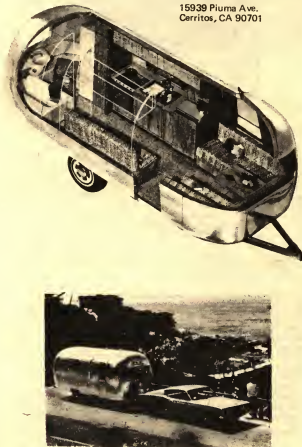
Reported: T. E. COROTHERS  
Bacteriologist  
City of Sioux City, Iowa

Some current prices in Bay Area

1971	21'	\$5400
1970	23'	\$5400
1965	20'	\$4500
1965	17'	\$2800

If you buy in August when the sales on this year's models start, you may save \$1,000 or so. For nearest dealer consult yellow pages or:

Airstream  
107 Church St.  
Jackson Center, Ohio 45334  
15939 Pluma Ave.  
Cerritos, CA 90701



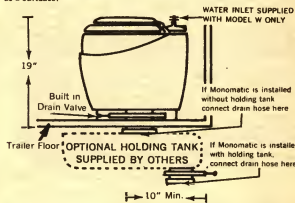
## Monomatic Toilet

Every time you take a dump or a leak in a standard john, you flush five gallons of water out with your piddle. Five gallons in the Monomatic accommodates one hundred uses before it needs replacing. The cycling system, involving a chemical and filtration, was developed for the airlines and has spun off into general use for recreational vehicles such as campers, trailers, boats, etc. It might also be useful for water-short areas such as deserts, mountain tops, and New York.

—SB

Monomatic Toilet from:  
trailer supply dealers or write  
\$195.00 approx. Monogram Industries, Inc.  
10131 National Blvd.  
Los Angeles, CA 90034

The chemical costs \$4.75/box. The Monomatic runs on 12 volt current. I see where they have a box that disguises your toilet as a suitcase.



If you prefer fire to water, try Destroyer, which cooks the living shit out of you. No water. Requires gas and electricity. \$560, from Combustion Toilets, Walworth, Wisconsin 53184.

## Monomatic Note

The monomatic-type toilets have been available here for several years. The chemicals (which keep the smell down) have caused problems since they utterly destroy all bacteria. Thus, when you dump the bucket in your friendly neighborhood sewer system, their bacteria (which eat the garbage) are destroyed which makes them unhappy.

Martin Minow  
Bromma, Sweden

## Quench Water Purifier

Here's what they say about it. We haven't used one. Recycle your piss.

—SB

MAKES CRYSTAL CLEAR, DISTILLED WATER FROM

Sea Water  
Lake and Stream Water  
Hard Water  
Contaminated Water  
REMOVES ALL SOLID IMPURITIES  
AS EASY TO OPERATE AS A COFFEE POT  
NO FILTERS TO CHANGE  
STARTS UP IN FIVE MINUTES  
COMPLETELY SAFE

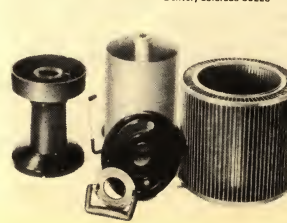
MAKES UP TO 2 QUARTS OF PURE WATER EVERY HOUR

USES HEAT FROM ANY SOURCE  
Camp Stove  
Sports Stove  
Camp Lantern  
Gas or Electric Range  
Campfire (bed of coals)  
Liquifier Burner

THE QUENCH Water De-Salter/Purifier supplies fresh water wherever you are. All that's needed is a source of water; any water, and a source of concentrated heat, any heat. The QUENCH De-Salter delivers up to two quarts of fresh, clear, salt and mineral free, distilled water every hour for as little as 1¢ per quart.

Cost: \$100.

Terraqua Marketing Division  
Box 26019  
Denver, Colorado 80226



## Recreational Vehicle Equipment

If you're outfitting a bus, camper, or trailer with lights, refrigerator, stove, furnace, windows, vents, sink, shower, toilet, etc., check on local suppliers. If you're getting a bunch of stuff you may work a wholesale deal (see p. 227). One mailorder supplier is:

Briggs Trailer Supply  
3520 Portola Drive  
Santa Cruz, CA 95060



\$ 17.95 \$ 39.95



MONKEYING AROUND

In D.R.'s mind the bus was a total wreck and he was ready to leave it and go to town with Virgil and find a mechanic who could fix it for him. But Virgil said let's take a look at it since we're here. About two minutes after he lifted the hood and shined his light on the problem he had Urgan's motor and the headlights working as well as they ever had.

"How did you do that?" asked D.R.

"Oh," said Virgil. "I just said a little prayer and monkeyed with it." He laughed then and settled back in his seat as D.R. put Urgan in gear and pulled back onto the blacktop.



## How to Keep Your Volkswagen Alive

John Muir has written what may well be your V.W.'s best friend. In this book you are invited to "tuck take the book out to the car with your controls on for a guided tour."

To I did. My guided tour of the car and the book's easily varied descriptions convinced me that it is the best I've encountered yet. It's written for the layman (us), and as such makes about 80% of the common VW ailments both clear and resolvable.

If you take it literally, you will learn to "feel the car" and perform the necessary tasks with love. There are also many pages devoted to what you can do when hung up on the mud flats for one reason or another. While "Volkswagen Technical Manual" contains more pictures of the beast, "Volkswagen Alive" is what I would prefer to have when it's time to untangle the metric wrenches.

(Reviewed by Don Burns)

OK to here's a good book on how to fix your VW written in a chummy style that will not be too amusing the second time you read it. There's a real collection of tricks and pitfalls that to my mind is well worth the money. But some of them are mishaps of old wives tales that are not true (there's a bit about the VW Underwear. What makes the VW dangerous is Overwear). I guess more than you will it too. Also, some of the really dramatic aspects of repairing old VWs such as headlights that are about as bright as birthday cake candles, are simply and grossly dismissed without telling you how to do anything about it. HOWEVER...an idiot can actually do major repairs on his VW with the aid of this book, and that, friends, is why I bought it. I would recommend that you have this and the Elfrink book at your side. John Muir also gives lists of tools you will need to have, and when he lists them, he lists them in a morale building smug. He also tells you when to quit and what not to attempt. Any VW owner should be able to save the price of the book with a week of getting it. Reading it will aid you in keeping your bug out of the shop in the first place. There's a "how to buy a used VW" chapter too. And he starts out "Come to kindly terms with your Aas for it bears you." Indeed, I'd call it indispensable.

(Reviewed by J. Baldwin)

## How to Keep Your Volkswagen Alive

John Muir

1986, 242pp.

\$5.50 postpaid

from:  
Western Distributors  
Box 613  
Santa Fe, NM 87501

or WHOLE EARTH CATALOG

## Volkswagen Technical Manual

Besides Muir's book Elfrink is considered the best VW repair book. This one covers only up to 1965. For later models they have other manuals. Good prevention against getting burned by the Volkswagen agencies in Reno and Oklahoma City (name your favorite villain; those are mine) when a dis-maying noise starts following you down the road and your trip shifts from 400 miles a day to nothing a week.

(Suggested by Don Burns) —SB

Volkswagen  
Technical Manual  
Henry Elfrink  
Automotive  
P.O. Box 20715  
Los Angeles, CA 90006

\$3.50 postpaid

or WHOLE  
EARTH  
CATALOG



## Baja Bug Kit

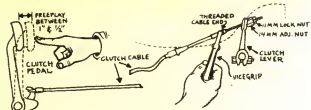
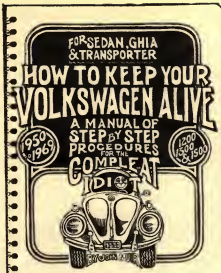
VW Owner!

If your commune's road impassable during the winter rains; have you always wanted to drive the rough dirt roads of Baja? If you already have a VW beetle, the Baja Bug is the simplest, least expensive and most versatile conversion kit on the market. You can keep your sedan and have your drive buggy too! Unlike other Baja Buggy Kits, this one does not require chopping, shortening, and welding the belly pan or buying an expensive fiberglass body without heater, windows or top. You can do this conversion easily at home in one- or two weekends. More ground clearance, room for big wheels and tires and easy access to the engine are major advantages. Important accessories available for serious off-road drivers: skid plates, air filters, high clearance exhausts, etc. VW bus owners will be interested in flared fiberglass fenders for the headlamps.

Miller-Havens Enterprises catalog 25 cents  
Baja Bug Conversion Kit \$239.95  
Baja Bug Fender Kit 24.95  
(Shipping not included)  
Miller-Havens Enterprises  
2944 Randolph Ave.  
Costa Mesa, California 92626

Janet Nichols  
Palos Verdes Estates, CA.

248 Volkswagen  
Nomadica



Take the hub cap off the wheel and check the brake lining in each wheel. You can see it through the adjustment hole with the flashlight. You may have to roll the car back and forth a little to get the lining in view, and if the outside lining is strong, a jacket or cloth over the fender and your shoulders will cut the daylight so the lining can be seen. If the lining is about one-eighth of an inch thick, you have plenty, but if it is less than a sixteenth, you will soon have to reline the brakes and you should know that.

Again, this doesn't apply to those who already know they're going to buy new pistons and cylinders, but you others, mark the pistons.



With a nail or file, scratch the number on the top of the piston, through that carbon, and draw an arrow pointing toward the flywheel, like I, II, etc. Start with #1, get it out as far as I'll go, and remember the WARNING.

## Western Distributors

Big parts—at sensible prices. This small mailorder house offers the VW owner a chance to buy imported parts by car at really fair prices. Not all parts are offered, but the ones most often replaced (cables, points, brakes, etc.) are there. Genuine Bosch sparkplugs are a bargain at 55¢ each postpaid. No minimum order, either. A few accessories, plus a VW Technical Manual complete the offering. Parts are listed for the Beetle as well as the Gha, Bus, Fastback, Squareback, and Variant. Free catalog is offered. Service —good. Postage—all items are shipped postpaid.

(Suggested and reviewed by Gerard Ruch)

**Catalog**  
free

from:  
Western Distributors  
Box 613  
Cedar Crest, NM 87008

DESCRIPTION	1300-1500-1600	FUEL SYSTEM	ORDER NO.	PRICE
Fuel Pump (1300)	50-F-1	\$12.95	50-F-1	\$12.95 ea.
Fuel Pump (1500-1600)	50-F-2	13.95	50-F-2	13.95 ea.
Fuel Pump Kit (1300)	50-F-3	2.10	50-F-3	2.10 ea.
Fuel Pump Kit (1500-1600)	50-F-4	2.60	50-F-4	2.60 ea.
Carburetor (Must have carburetor number)	50-F-5	36.95	50-F-5	36.95 ea.
Carburetor Kit (Must have carburetor number)	50-F-6	4.25	50-F-6	4.25 ea.

## Another VW Book

You have in your catalogue two very good books on VWs. How to Keep Your VW Alive is good for technique while Elfrink's Technical Manual supplies sometimes very helpful extra information. However if you happen to own a 1965 Sedan (like I do) or a later model you will find that the Technical Manual is confusing and not complete. The latest edition of this book was published in 1965.

I have a better one. It is called The Volkswagen Owners Handbook of Maintenance and Repair, published by Floyd Clymer. This is a very thorough book with up-to-date and easy to understand (and to locate) exploded diagrams, and pictures. I recommend it highly to anyone that owns a '65 Sedan or later as it has sections for '65's, 1300's, '67's, '69's, and '69's.

Clymer publishes other books on VWs including one on 1600s, Transversals, touring in a VW, how to drive a Road Test a VW, and even an old reprint of one of the first VW instruction books. Clymer also publishes books on many other foreign makes (Porsche, Datsun, Volvo).

Best Regards,  
Steve Kleiser  
Van Nuys, CA

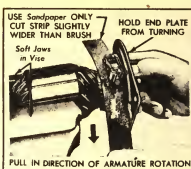
Volkswagen Owners Handbook of Maintenance and Repair  
\$3.00 from Floyd Clymer, 222 No. Virgil Avenue, Los Angeles, CA 90004

## Basic Auto Repair Manual

This manual is intended to be an introduction to automobile mechanics and the more formal professional shop manuals. It contains about all the amateur mechanic needs to know in order to diagnose, repair, and maintain domestic cars and VW 1954-1965. It is assumed that the mechanic has no experience at all. All major assemblies are well illustrated and explained both in principle and specifically, with note made of quirks found in certain models. There are chapters or remarks on tools needed and how to use them, working safely, junk yard technique, on the road repairs, and general money saving. There is a very good chapter on logical trouble shooting. "If this is wrong, try this first, this second, etc." Included is most likely diagnosis and prescription. Common repairs like "putting in new points" are covered neatly. Major jobs are presented so that the amateur mechanic can get most of the work done before calling in expensive expert help. It is clearly stated when to give up, and what not to attempt without expertise. They even tell you how much you will save, and how long it will take. This is a great book for that person trying to keep the oldie going and who wants to understand cars in general. It fits girls too. Well worth the money.

[Suggested and reviewed by J. Baldwin]

This is a new revised edition. Better than ever.



6. Seating Brushes



8. Distributor Lubricating Points

Address requests for automotive catalogs to:

Sears Roebuck and Co.  
Local catalog order center  
Montgomery Ward and Co.  
Local catalog order center  
Spiegel Inc.  
Chicago, Illinois 60609  
J.C. Whitney & Co.  
1917 Archer Ave.  
Chicago, Illinois 60616  
Honest Charley Inc.  
108 Honest St.  
P.O. Box 853  
Chattanooga, Tenn. 37411

SA oils are non-detergent, with no performance requirements. This classification includes not only high-quality, non-detergent oils put out by major companies, but also the dregs from the local bar pit. If you want a good non-detergent oil, you will have to rely on the reputation of the maker.

SB oils have a few additives that protect against scuffing, bearing corrosion, and oil oxidation. These oils give only minimum protection. SC oils are better. They have additives that protect against high- and low-temperature deposits, rust, wear, and corrosion.

SD oils are the best. The protect against all the conditions that the other oils do, only more so. If a car maker recommends SC oil, you will be giving your engine greater protection by using SD oil.

Mail order, as we've said, takes a little time but is an entirely satisfactory way of buying parts. The Sears, Ward, Spiegel, J.C. Whitney and Honest Charley catalogs, free for the asking, are amazingly complete and J.C. Whitney, at least, offers to help you find a part that is not listed. All of them stock parts for a wide variety of imported cars. A further advantage is that they "guarantee satisfaction or your money back," a protection that may or may not exist when dealing with a car dealer or jobber.

## Joblot Automotive

Very groovy place is Joblot Automotive in Queens, N.Y.—Address: Joblot Automotive, Inc. 58-11 211th St. Queens, N.Y.—they have an almost complete stock of spare parts for all Ford's Mercury & Lincoln (including truck parts) going back at least to Model A days, and the parts are mostly original factory parts that they bought up over the years as the dealers and factory decided not to bother stocking them anymore. They have a catalogue and will mail order stuff anywhere. The last time I was there the owner told me that he started out supplying hard to get Model A parts to South America and other places where they were still widely used. When stocks of original Model A parts became scarce people in those countries began manufacturing them domestically to supply the local demand. He now imports a tremendous range of newly manufactured Model A parts and asserted that it would be possible to assemble an entirely new MINT Model A from parts. He is very helpful and should give very satisfactory service.

[Suggested and reviewed by Larry Nordell]

## Catalog

\$5.00

from: Joblot Automotive Inc.  
58-11 211th Street  
Queens Village  
Long Island, New York 11429

## J. C. Whitney Automotive Accessories & Parts

A really great catalog of car parts, not all of them above suspicion as far as usefulness goes, but on the other hand very complete and especially good for older cars, is the J. C. Whitney Catalog. They stock parts for such things as model A Fords and Borgwards, Jeeps and VWs, and offer used parts.

[Suggested and reviewed by J. Baldwin]

J. C. Whitney is also known as Warshawsky & Co. (same catalog, different cover). The Whitney catalog says \$1 on the cover, Warshawsky doesn't or does it by now?

—SB

## Catalog free

from: Warshawsky & Co.  
1900-24 So. State St.  
Chicago, Ill 60616

## Complete G.M.C.-CUMMINS-MACK DIESEL ENGINES

Complete with Accessories—Ready to Run

Good used John Deere at a fraction of the cost of new. Now listed, checked for oil pressure, new, excessive oil burning, and in good running condition. Complete from hooding starter, generator, fan, fan clutch, fan belt, fan blades, fan shroud, fan assembly, power air and air conditioner. New radiator, bigger water pump, new

5th, New



## Propane Conversion

### How to Propel Your Car with Propane

An Immediate Personal Action for Cleaner Air  
 (reprinted from Freedom News, February 1970)  
 In addition to long range cultural change, Ecology Action is interested in immediate personal actions aimed at saving our environment from pollution. In this endeavor we attempt to practice what we preach, and thus to help have been converting the vehicles upon which we must occasionally rely to propane gas (also known as).

We have culled the following information from Imperial Rock Gas of Richmond.

If you're interested in doing something about air and water pollution you, and drive a gasoline fueled, internal combustion engine vehicle, consider to propane. Conversion is a simple, financially beneficial operation which reduces your vehicle's harmful emissions by 50%. Some estimates go as high as 75% to 80% reduction in harmful emissions.

There are other ways to reduce your personal impact on the environment, of course, and several alternatives to pouring gasoline wastes into the ecosystem. Making is the best alternative of all, and public information reduces your impact.

Gas turbines, steam driven, and electric engines all produce less harmful exhaust than the present gasoline engine, but these alternatives are not possible ones for most people, for a variety of reasons. Electric, steam and gas turbines cannot be made available to any significant number of persons now enough.

Propane is different. You can go to a local propane dealer who does conversions and have your car running on propane in one day. That's how long it normally takes.

The cost is approximately \$300 from which you can share substantial amounts in a variety of ways. Labor costs about \$40, but the job is simple enough so that anyone with rudimentary mechanical knowledge can do it.

How it works: Basically, a special carburetor replaces the air filter; a heat exchanger is mounted under the hood and connected to the water hose that runs to the heater; a fuel line must be run to the tank which is usually mounted in the trunk.

This last item, the tank, is the single most expensive aspect, costing \$120-\$180 for a new tank capable of holding 24-36 gallons of fuel. A used tank often costs less than half as much, so shopping around for one is worthwhile.

Even with these cuts in cost, however, the average American car owner may not feel he can afford conversion. But, as economists point out, cost is a relative concept against which we must also benefit, and the benefits of propane are substantial.

First, as previously mentioned, the use of propane cuts harmful emissions by 50%, thus reducing air pollution directly and water pollution indirectly (hydrocarbons and other exhaust products are inevitably washed off the road by rain or precipitated out of the air).

Another benefit is that the use of propane can increase the life of a new engine from 2-10 years. According to Mr. Carl Warner of Imperial Rock Gas in Richmond, forklift trucks, who have used propane for many years because of its lower emissions and the enclosed, indoor nature of much of their work, claim at least a 5-2 ratio of improved engine life. This is because, in part, the propane enters the engine as a gas, not as a liquid, and sludge and carbon are essentially eliminated.

Fuel Cost is Lower: Still another benefit of propane cost is fuel cost. Only one grade of propane is distributed: a high octane grade comparable to high test gasoline. The cost, in the Bay Area, is about twenty-four cents per gallon. Though the per gallon mileage of propane is about 3% less than gasoline, the consumer still saves a considerable amount, which, even excluding longer engine life, makes propane conversion profitable over the long run.

Cal Gas of Sacramento claims other propane benefits: cuts maintenance costs; cleans up longer spark plug life—no carbon to foul spark plugs; instant cold weather starting—no flooding or choking of carburetor; fuel pump problems eliminated because there is no fuel pump.

Another consideration: the potential propane converter makes is the availability of the fuel. Most cities of 50,000 or more have propane supply outlets. National and state listings are available from gas companies usually on request.

But even without careful planning the propane motorist need not fear being stranded without fuel, for the standard conversion oper-

ation leaves the vehicle with a gasoline potential which may be realized by flipping a dashboard switch. Just keep a small amount of gasoline in your car.

A few other considerations: If your car is air cooled (for example, Volkswagen) about \$20 extra must be spent for adaptive equipment. The higher the compression ratio of your engine the more efficiently it will run on propane (compression usually corresponds to engine size and number of cylinders but not always, so check your owner's manual).

Pressure Conversion: In addition to converting your own car, you can take a step toward lessening pollution by encouraging other individuals, industry and government to convert. Some steps have been proposed already in this area, e.g., Reagan's claim that state vehicles were to be converted and recently published intentions of Contra Costa vehicle conversions. Concerned individuals should keep track of these intentions.

If you want better quality air and water enough to do something, but don't think you can afford the initial cash outlay for conversion, you might consider trading in your present car for one worth about \$300 less and use the difference. You'll make it back in gas savings.

Further, remember that propane is only a partial and interim solution to pollution. Even with a converted car, you still are responsible for concrete highways, noise, congestion, Santa Barbara oil leaks and Torrey Canyon shipwrecks. The answers to these problems lie with a deeper commitment to a quality life; with walking and returning the joys of bicycling riding.

Distributed as a public service by Ecology Action Educational Institute Box 9334 Berkeley, California 94709 Phone: (415) 843-1820

I have heard of a new car dealer who is using a free propane conversion as a way to boost sales of his left over 1969 models. (Hillsdale Dodge in San Mateo, spec.) He also tries to sell a propane conversion with all new car sales (\$500 per) by giving the customer a stiff lecture about civic duty and air pollution.—Fred

## Auto Engines and Electrical Systems

There are a number of books available on how to repair automobile engines, but not many which explain so well as this one does why each part is designed as it is, why a certain repair procedure is used, or what causes the wear on a worn part. I wanted a book which would help me to understand the details of engine design and construction instead of just how to fix them, and I was extremely pleased to find that this book does both. Its explanations are clear, concise, complete, and profusely and excellently illustrated. Its authors obviously know what they are talking about, and write well. There is no bullshit and no excessive technical jargon, just good solid information. It is practically oriented, written as a textbook for mechanics, to provide the groundwork of basic knowledge a mechanic should have.

[Suggested and reviewed by Mark Vickers]



**Auto Engines and Electrical Systems**

**\$10.00** postpaid

from:  
Motor  
260 W. 55th Street  
New York, N. Y. 10019

OR WHOLE EARTH CATALOG

## Books About Fords

Restoration manuals, service bulletins, buff books.

—SB

### Catalog

free

from:  
Polyparts  
Box 31207  
San Francisco, CA 94131



## Hemmings Motor News

A 100 page magazine full of ads for Ford and Non-Ford cars and parts and literature and misc... that's "Hemmings Motor News!" Lots of pictures make the whole thing worth while for the person with a casual interest in old cars. (Almost all the cars advertised are vintage or antique... but not all of them.) It's monthly and cheap.

The publishers are coming out with a magazine called "Special Interest Autos" that looks good. It will be available for about five bucks per year. Looks like it will be interesting, but you can decide for yourself. Get the "Hemmings Motor News" first and it will tell you where to send off for "Special Interest Autos." The former is the real tool, the latter looks like it might be fun.

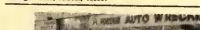
Hemmings Motor News (monthly)  
 \$2.75/yr. 3rd class;  
 \$9/yr. 1st class  
 \$13.50/yr. airmail

from:  
Hemmings Motor News  
 Box 380  
 Bennington, Vt. 05201

David O. Weaver  
 Wichita, Kansas



Armored Money Truck 1980 Wells Fargo body, 1989 Box nose and chassis. Bulletproof walls and windows. 70 per cent restored, sandblasted, primed, interior completed. \$800. Free delivery. D. Donovan, 1126 Washington St., East Bridgewater, Mass. 02332.



## Truck Repair Manual

If you have a truck, chances are marvelous you spend a fair amount of your time under it or in the front end of it. Judicious use of this book might save you some down-time. It covers the gamut of trucks and tractors, 1960-69, and has better than usual illustrations of how to get at what you're working on.

Motor's Truck Repair Manual —SB  
 1969: 1154 pp.

\$17.00 postpaid from:  
 Motor Book Department  
 250 West 55th Street  
 New York, N. Y. 10019



## Maintenance

one way to force Detroit to stop producing tiny chromed-up pieces of shit is to stop buying what they produce, spend a little time operating on old terminal cases and, through the miracle of transplant, give the old '57 Ford retractable another ten years of life. old cars run just as well as new ones, if the driver knows enough about his machine to keep it running. factory service manuals have the best information.

—jd

## Wheels

If you are out in the woods and are needing to get into heavier vehicles a specialty magazine is Four Wheeler... not commonly available on many newsstands. You can get it for \$6.00 per copy when you can find it or for \$5.00 per year. Road tests, conversions, accessories like winches, parts, etc.

From:  
 Four Wheeler  
 P.O. Box 845  
 Reedley, Ca 93333

If you're into sports cars and some just can't get out of 'em, Road & Track is the BEST for road tests and technical stuff. Pretty thorough but fine photography and text. \$7.95 each or \$7.00 for 1 year subscription.

Road and Track  
 1499 Montross Ave.  
 Newport Beach, Ca 92663

Ken  
 Newcastle City, CA

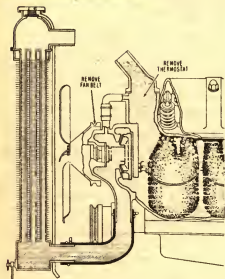


Fig. 38 Combustion leakage test of cooling system. Air bubbles in engine outlet with engine running confirms this

**250** Vehicle Repair  
 Novices

## Four Wheel Drive Handbook

Since we're getting a Dodge Powerwagon to pull our trailer into exotic places, this book came along just in time to be of excellent use. Every page has something. Including sensible warnings that 4wd may not be what you need—it's expensive, harder to service, just a bit better than 2-wheel drive. The book has an excellent list of suppliers. —SB

Four Wheel Drive Handbook  
James T. Crow, Cameron A. Warren  
\$170, 96 pp.

\$2.50 postpaid from:  
Parkhurst Publishing Co.  
1489 Monroe Ave.  
P.O. Box 1757  
Newport Beach, California 92663  
or WHOLE EARTH CATALOG

Low range, not used enough by 4-wheelers, lets things happen gently.



### Desert Survival

Three people died in this valley last summer. They drove in with no water. The car stalled, and they tried to walk out, arrived nowhere. Dumb tourists.  
Desert, succinct, and free, this manual from Maricopa County would have made them smart tourists with a good story to tell. —SB

[Suggested by Mark Goodman]

### Desert Survival

Information for Anyone Traveling in the Desert Southwest  
1971  
27 pp.  
free (and postage)  
from:  
Joint Maricopa County Civil Defense & Disaster Organization  
2038 North 52nd Street  
Phoenix, Arizona 85008

When driving in sand or snow, traction can be increased by partially deflating tires. Drive slowly on low tires. Do not remove so much air that the tire may slip on the rim. Start, stop, and turn gradually, as sudden motions cause wheels to dig in. If you plan on driving in the desert, practice "difficult traction" in a dry wash with another car standing by to tow you out if you become stuck. Experiment with the various footings. There are certain tool and equipment requirements if you intend to drive off the main roads: one or more shovels, a pick-mattock, a tow chain or cable, at least 50 feet of strong tow rope, tire pump, axe, water cans, gas cans (both FILLED), and of course, your regular spare parts and auto tools. For rope, consider nylon rather than manila. It costs more, but has twice the strength, will last longer, and its elasticity is highly beneficial in extracting stuck vehicles. 1" nylon has a working strength of 2,000 pounds and a breaking strength of 10,000 pounds. Be sure that your car is in sound condition with a full gas tank, a filled radiator, a filled battery and new (and extra) fan belts.

**Determining Direction from Shadow:** Select an object at least 3 ft. high which casts a shadow with a well defined projection. Mark the shadow tip—wait 10 to 15 minutes and again mark the shadow tip. A line drawn from the first mark through the second mark will point EAST. Effective from about 9 a.m. to 3 p.m.

### QUICKSAND

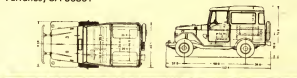
Quicksand is a deposit of fine sand in combination with water. It may have the appearance of smooth dry sand, but the water underneath lubricates the grains and allows them to flow easily. There is nothing mysterious about quicksand—it acts as any other liquid would, and if it were sent sensibly we can escape it. Man is lighter and will float in water, and therefore, quicksand. It has no power to suck down bodies, but friction struggling to free the feet creates forceful downward movement which causes the sand first to move away, then deeper hold on the body. Further struggling repeats the process until the body is engulfed completely. If caught throw yourself flat on your back. You will float. Get rid of extra weight. Throw your gun and pack off quickly. Don't hold up your arms—let them rest spread out on the surface. Roll slowly to firm ground, or turn onto your stomach and do a slow breaststroke. Move slowly and carefully, and you will "swim" to safety. Avoid getting caught—look for quicksand in river beds, washes and run-off areas of recent flash floods.



### Toyota Land Cruiser

The most work per dollar in 4-wheel drive you can get this side of a truck. New soft tops run about \$3,000, hard tops \$3,350. —SB

Toyota dealers are pretty well spread around. You can check with:  
Toyota Motor Sales  
2056 West 180th  
Torrance, CA 90501



### Virtuoso Handy Jack

In going over your July issue, was interested to note your mention of the Handy Jack. I have used one for year—very effective. Here are three uses for its well worth featuring:

- In case of auto wreck and car is collapsed, insert jack and use to "unbury" the car and remove victim. Last time I used it, man was badly crushed and was able to get some of the weight of car off him. He had skidded off road, turned upside down and roof collapsed and squeezed him. The Handyman Jack took a lot of weight off him, but I still couldn't get him out, although he was alive when I first reached him. If I had had two of these, I might have gotten him out—but dead when our ambulance arrived and took a tow truck to lift car off his body!
- When you skid off road in snow (or mud), place Handyman Jack for any bumper jack that will lift 3 or 4 ft.) under rear bumper. Raise to maximum height, then stand to one side and topple car off jack toward roadway. This will move rear end at least 3 ft.!! Repeat once or twice and you will have car wheels on road where they will get traction.
- Getting car out of a deep mud hole. I have used this many times! Attach a lumber chain (or 3 or 4 strands of heavy rope—chain is best as it doesn't stretch) to a tree or possibly another car or truck. Attach chain to one end of Handyman Jack. Attach other end of jack to car spring or bumper. If VERY securely fastened and work jack to pull car out. i.e. jack is horizontal. This really works as jack will pull at least 3 or 4 feet with each setting. Shorten chain and repeat as necessary. Carrying one of these jacks and a 100 ft. length of chain may save a \$20 towing bill! And in some parts of this country there just aren't tow trucks or phones available.

Maj. Lyman F. Barry  
Nunda, New York

In conclusion then, here are more of our somewhat subjective opinions about the various 4wds:

Most durable vehicle: Land Rover  
Most for the money: Toyota Land Cruiser  
Best on/off road combination: Ford Bronco  
Best for long-range off-road touring: International Traveler  
Best all around vehicle: Jeep Wagoneer  
Most fun to drive off-road: CJ-5 Jeep

There are some other driving pointers that apply almost exclusively to the snow country, such as rubbing a plant of tobacco or a piece of raw onion on your windshield to keep it clear of snow and ice (but don't use your wipers too).

Also as a general rule, your best tires should be on the front. Three-quarters of all tire troubles happen to the front tires in 4-wheel driving since they're the ones that reach the trouble first. It's a matter of putting your best foot forward.

At this point, we've got to say something about jacks. Here we heartily agree with the experts—always carry two jacks. There are times when two jacks may come in very handy—like the time when you want to switch a better tire to the front and use your not-so-good spare on the rear. But the primary reason, honestly, is to assure that you always have at least one jack that works.

### Cepek Tires

Good tires, good prices, good advice. Plus other dune buggy and off-road gear. —SB

### Catalog

\$0.50

from:  
Dick Cepek, Inc.  
9201 California Ave.  
South Gate, CA 90280



\$4.95, postpaid



"And so the President comes in with all this give away. Of course now he did have to do something, let's give the devil his due. And the people did get a little something to eat out of it which they had to have, and here I am on my way to get on the Happy Pappys if they'll have me. But what I mean is, everybody talked about how good it was to the President to do that, how kind it was of him to send in the food stamps and start the Happy Pappys. On he went, smart, you need to doubt it. One day they were about to revolt, the next they're glad to draw a dollar and a half an hour. And top it all, here comes the President's wife down in a jet plane to show how concerned her and her husband was for all the hungry people. They lined up by the thousands just to get a look at her ride by in a big car. Parked up yonder in front of the courthouse, got up on a truck bed and made a little speech about how beautiful these old hills are. And how fine the people are, how rugged and independent and so forth all the hillbillies are. And her supposed to be so beautiful. I didn't think she was so beautiful. Why that woman was so bow-legged she couldn't fit a hog up in a pen. I felt about half sorry for her, I declare I did. Me on a waffles, her richer'n Jay Gos, and I felt sorry for her because her legs was bowed. A man's got to be about half crazy to go around thinking like that, I'll swear it."

(continued) → Off Road  
Nomads **251**



## BMW Motorcycle

**BMW motorcycles**—as far as quality there is not another vehicle on the road that can touch them. Mine is 10 years old and has 143,000 miles on it. Last year I loaded it up with 430 pounds of people, camping gear and luggage and drove to Maine and then went 50 miles into the wilderness. I figure she's good for another 10/143,000. They are a bit expensive but worth every penny. If you're going to go nomadic, on or off the road, you might as well go all the way. It's the only way to travel. Western distributor is Flander Co., 200 West Walnut St., Pasadena CA 91103. Eastern distributor and sole importer is Butler & Smith, 160 West 63rd St., N.Y., N.Y. 10024.

[Suggested and reviewed by Larry Kafka]

**Note.** About 2 miles from here and eight months ago the reviewer Larry Kafka was killed and his wife Janet nearly killed—she's still in the hospital. It wasn't the BMW's fault, except that when the bike and a truck tried to occupy the same lane the truck driver had lots of protection and Larry and Janet none. No bike gives you protection. I ride mine slow.

—SB

## Intelligent Motorcycling

A contradiction in terms. However this booklet of advice reprinted from *Cycle World* says more in less space about surviving and enjoying your bike than anything else I've seen.

—SB

## Intelligent Motorcycling

William Kayving  
64 pp.

\$2.00 postpaid  
from:  
Parade Publishers  
Box 5372  
Santa Barbara, CA 93103

With anyone who has ever had a flat at speed on a cycle, preventive maintenance of tires and tubes rate high priority. A rider can ride a raggedy old machine with chipped paint and a smoking exhaust, but as long as the wheels are well shod, he will avoid the first and foremost hazard of motorcycling.

There are probably only two suitable methods of coping with rainy days as far as cycles are concerned. The first is to stay home or take your car. The second is to ride with the mental attitude that you are traveling on a sheet of oil-coated glass enhanced here and there by large patches of greased BB's. This attitude should help

give you the sensitivity of response and precise control necessary to stay up on rain-slick pavement.

In the realm of spare parts, a new spark plug and a wrench to install it ranks high... perhaps tops. Other essentials are a spare metal link, a few nuts and bolts, a roll of tape and length of two of baling wire. These items plus a screw driver and pliers taped to the frame will most often be sufficient to get a rider home from the backwoods should something fall off or pop out.

Minimum equipment for the off-the-road rider starts with an approved helmet since about 75 percent of all vehicle accidents result in head injuries. Also required for the backwoods bouncer are gloves, boots, and, if possible, leather clothing or heavy denim. Remember, even when the weather is warm and heavy clothing is uncomfortable, protection for your elbows and knees will keep the skin in those areas intact.



## Modern Motorcycle Mechanics

ride your motorcycle;  
fix your motorcycle.

—jd

[Suggested by Bob McIntyre]

## Modern Motorcycle Mechanics

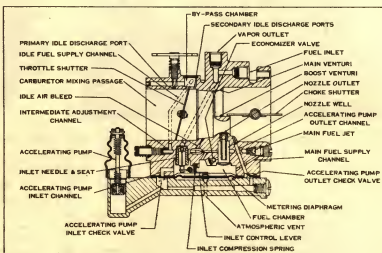
J. B. Nicholson  
1942, 69; 702 pp.

\$8.00 postpaid

from:  
Nicholson Brothers Motorcycles, Ltd.  
225 Third Avenue North  
Saskatoon, Saskatchewan  
CANADA

or WHOLE EARTH CATALOG

## HARLEY-DAVIDSON SERVICING



## Bicycle Parts

How best listing cycle parts from England. One co. I've had super service from and saved lots of money... fast too!

A.A. Snell & Sons  
126 Boundary Road  
Watlington, London E12

Drew Langston  
San Francisco, CA

## Pedal Power

**Bicyclists constitute a bready wing of the ecology movement. If you want to work in city hall, you can get advice, examples, access, etc., from:**

The Bicycle Institute of America  
122 East 42nd St.  
New York, N.Y. 10017

## Jawa Motorcycle

I was glad to see the BMW mentioned in the Supplement, as bikes are good tools with lots of mythic freedom meanings for most Americans; and for those who are still into the old-fashioned reciprocating life style, they have the extra advantage of being smelly, noisy, sexy, and fast.

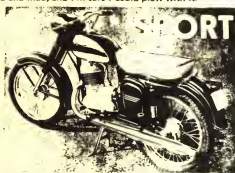
I'd like to mention the Jawa, which is at the other end of the scale from the BMW and might be of more interest to rural/community people.

The Jawa is a 2-stroke 125-300 cc lightweight made in Czechoslovakia. Parts are easy to get in the (plander com in the West) and the bike is dirt cheap to buy and run. Prices run about \$150-\$200 below Italian and Japanese machinery.

But the best thing about the Jawa is that you don't need many parts. The bike was designed to be, and is the staple transportation device of the Communist world. It's simple, slow, reliable and strong.

Like the BMW, the Jawa is an old-fashioned "backwards" machine—unchanged since 1954. The engine is a long stroke, piston port, plain bearing low RPM single (except for the 350 twin), all of which means high torque at low speeds. It's a thumper, a tractor.

The BMW is a great road bike but as soon as you take it in the dirt you're in trouble. With the Jawa, it's the other way around. It'll shake the shit out of you on a long trip, but it'll kick it into low and stand up on the pegs and you can chomp through anything. I like to ride mine in the sand and mud, and I'm sure I could plow with it.



I bought my new 1969 for \$420! Old ones are even cheaper, as they start to rust before you even get them home. Like an East European drip dry suit, it wills right away but wears forever. This seems like a good cheap draft horse for a community, as you can carry a lot of stuff on a bike after you get used to it, and also hook up a small trailer. I cruise Manhattan looking for firewood on mine.

Check any bike shop in the east or AMERICAN JAWA LTD.  
38-15 Greenpoint Avenue, Long Island City, N.Y. 11101.

[Suggested and reviewed by Terry Bission]

## Schwinn

Since the ecology drive is on, I guess there'll be more and more people riding bicycles. I used to work in a bicycle shop which carried various brands. Having worked on bicycles and having heard complaints and criticisms about different brands, I have come to the conclusion that there is only one bike worth buying: a Schwinn. Selections in frames, colors, models and sizes are vast, and their well-built construction are some of the reasons why I favor them. Also the availability of Schwinn parts is something many people overlook. Schwinn's guarantee cannot be excelled, (most don't even have a guarantee). I've seen Schwinn 50 years old that are in much better mechanical shape than new off-brands. Also, in your Spring Catalogue's Bicycle Page, it advises using the hubs and bearings. Don't! The grease that is in these hubs will be washed out when the oil quickly seeps out, leaving dry bearings.

Concerned,

PFJ Palmer C. Brown  
7th Psychological Operations Group  
APO San Francisco 96248

## 10 Speeds from Canada

I've got a good idea for traveling, and since I haven't seen anything about it in your catalog, I'll let you in on it.

Last summer, I decided to travel, going down to Boston, Cape Cod and then back thru Vermont, and then back here, Montreal.

One Problem.

I am not a rich person. So, to make a long story short, I rented a 10 speed bicycle. After cycling just 10 miles the first day, and 15 miles the second day (had some tired muscles, but nothing really bad) the third day went 30 miles, so that at the end of the 6th day, I could do 70 miles.

Yeah.

Well, you might say: "That guy's an athlete." But no, I'm a girl, and for exercise I walk around the block once a week, so you really don't have to be strong in any way, just a bit of patience, and around \$120.00 to buy one of these things. With a 10 speed Citicore (what I recommend) you practically glide up a hill. A people don't get heavy when you go there a small town like when your hitchhiking, except they know your leaving... by your own means. And you can carry loads of stuff with you on a saddle bag on the carrier on the back of the bike. I can't recommend any magazines or booklets off hand, but if you know of any, I think it would be a good idea to print it.

Also great to fight pollution, and move around faster, in the city! SORY ABOUT MY ENGLISH BUT I'S A FRENCH CANADIAN, AN' YOU ENGLISH ARE OW TO GET IT.

Andre's Lapard  
Ville LaSalle, Quebec

P.S. If you want to write back, feel free & we could run about our nice facet prime-minister, our little revolutionary ideas, the kid-nappings, I knew the kidnappers' sister.







## The Complete Walker

Some of them old boys are into making houses out of chicken wire and condoms. Some of them can gather you a salad right off the forest floor. Some can make you a computer out of old Stromberg-Carlson radio parts and have enough wire and tubes left over for two later death rays and a UFO. But Colin is into walking. His two previous books are mainly about walks: In *The Thousand Mile Summer* he tells about one he took up the entire Sierra range, and in *The Man Who Walked Through Time*, he walks the whole Grand Canyon. This one is about walking, not walks. It's not full of lore and woodiness. It doesn't tell you how to get back to nature, or cast civilization from your back and wander out with a Bowie knife and a jackstrap. It gives a little walk philosophy, and then proceeds to discuss, in just the right detail, how to put a nice little well-equipped house and its fittings on your back, how to be able to go out and walk for a long time without having to come back for more stuff.

Besides just the stuff, what to take and what to leave behind, it also takes you on a trip through Colin Fletcher, which is quite an outing all by itself. It's hard to imagine a book on backpacking technique that will make you laugh out loud all the way through, but he does it. He really loves poking fun at himself. He gets completely hung up describing some gadget or technique which he then admits he's never tried. He'll spend a whole page defending what seemed at first an impossibly fuzzy personal idiosyncrasy, and at the end you'll be dying to go out and try it for yourself. He actually has a sizable section on how to urinate and defecate in the out-doors, and it's a fine description. He includes a very complete appendix on supplies, a list of walking organizations, and even a series of inspiring quotations to read while walking or thinking about walking.

Most important, though, is the only backpacking book I've ever seen which, if read carefully, will actually tell you how to do it in great enough detail to enable you to just go out and do it. It's also the only one that will really make you want to go out and walk for absolutely no ulterior motive. Be sure to dig pages 45-52, 123-132, 182-186, 213-218, the whole Furniture and Appliances section, and all the illustrations.

The only adverse comment I would make is that his food preferences seem pretty snappy. But he also quotes the old proverb about hell being a place where the politicians are French, the police German, and the cooks English.

[Reviewed by Roland Jacopetti]

First remove any obvious and rectifiable local irritant, such as a fragment of stone or a naked sock. Then cover the tender place. Cover it even if you can see nothing more than a faint redness. Cover it, in fact, if you can see nothing at all. Being a hero is being a bloody fool. The covering may only be needed for a few hours; if you take it off at night and let the air get at the skin you may not even need to replace it next morning. But if you do nothing at the first warning you may find yourself inside the hour with a blister that will last a week.

One of the surest ways to tell an experienced walker from a beginner is the speed at which he starts walking. The beginner tends to start away in the morning as if he meant to break every record in sight. By contrast, your experienced man seems to amble. But he is and certainly by evening, their positions have reversed. The beginner is dragging. The expert, still swinging along at the same easy pace, is now the one who looks as though he has recorded a mile. One friend of mine, a real expert, says, "If you can't carry on a conversation, you're going too fast."

## The Complete Walker

Colin Fletcher  
1986, 353 pp.  
\$8.18 postpaid  
from: Alfred A Knopf, Inc.  
33 West 60th Street  
New York, New York 10023

or \$7.95 postpaid

from WHOLE EARTH CATALOG



There is a cardinal rule of travel, all too often overlooked, that call the Law of Inverse Appreciation. It states: "The less there is between you and the environment, the more you appreciate that environment."

At this point, steam issues from the stew pot. You reduce the heat to dead-low or thereabouts (taking care not to turn the stove off in the process), stir the soup around a couple of times, taste appreciatively and replace the cover. While dinner simmers toward fruition you empty two ounces of dried/dehydrated peaches and a little water into the small cooking pot and put it ready for breakfast, up alongside the pack. Then you (or down a few thoughts in your notebook, stir the stew and sample it, find the beans are not quite soft yet. So you study the map and worry a bit about the morning's route, put map and pen and pencil and eyeglasses and thermometer into the bedside boots, take off your shorts and slide halfway down into the mummy bag out of the wind, and stir the stew again and find it ready. You pour and spoon out a cupful, leaving the balance on the stove because the wind is blowing distinctly cool now. And then, leaning comfortably back against the pack and watching the sky and the black peaks melt, you eat, cupful by cupful, your dinner. You finish it—just. Then you spoon-scoop out every last possible fragment and polish-clean the pot and cup and spoon with a piece of toilet paper. You put the paper under the stove so that you can burn it in the morning. Then you put cup and spoon into the breakfast-ready small pot, pour the morning tea water into the big pot, set the big pot alongside the small one and the sugar and milk containers alongside them both, put the current day's ration bag into the pack (where it is moderately safe from mice and their, night allies) and . . .

## Off-on-the-yoke

Because I so often walk without a shirt and therefore without a front pocket, I have had a very big on-the-yoke problem. I have a few on-the-yoke maps, roughly where the shirt pocket comes, but I use a notebook and map and sunglasses when I am out. Pen, pencil, compass, lens brush (page 233), and non-scented deodorant (page 233) (the name of the brand of I cannot imagine how I ever got along without such a pocket. Mine is a kind of anatomy book material, but anything else will do.

For this side job put your shirt on; see pg. 66.

waiting for  
the truck ride  
to and  
waiting for  
the highway  
to go  
somewhere  
else  
and live  
another  
way  
and find  
something else  
to do  
(with what I got)



## LETTING VIRGIL DRIVE

D.R. was fascinated by all the things that Virgil was saying, but after about half an hour on 421 again he started getting so sleepy he barely could keep his eyes open. He drove through the narrow curving part of the road that had caused him to turn back before, but once into the long valley beyond the narrows, Virgil's front wheels started dropping off the blacktop every mile or two, and finally D.R. had to tell Virgil they would have to stop so he could nap a while, unless Virgil would like to drive. Virgil said he'd be glad to try, but he was a little nervous about operating a car with such funny gears. He offered to just sit and wait while D.R. got some sleep, but when he thought about it that seemed pretty silly, so he pulled off the road and spent a few minutes teaching Virgil about Virgil's gears. When Virgil said he thought he'd it, D.R. told him it was all his, and he crawled through the junk scattered on the floor of the bus, stretched out on the mattress and fell asleep immediately.

## U. S. G. S. Topographic Maps

If you're interested in buying land or visiting remote areas you'll be using any maps you can get your hands on. The United States Geological Survey publishes the most accurate and detailed maps generally available for the U. S. (and possessions). Although some are a little dated, they consistently pack a lot of information into a fairly understandable format. Besides contour intervals, these maps indicate type of earth surface, roads, train tracks and trails, buildings, mines and various land marks; plus a whole lot of other stuff.

Two series of maps are available—15 minute quadrants (approximately 1 inch equals 1 mile, with 80 feet contour intervals, covering an area 14 x 18 miles); and 7.5 minute quadrants (approx. 2" = 1 mi., 40' contour, covers 7 x 9 miles.). The 7.5 minute maps are more up-to-date but have not been prepared for the whole country.

[Reviewed by Drew Langsner.]

U. S. G. S. also has Distribution Centers at:  
ALASKA: Anchorage, Fairbanks, Juneau and Palmer  
CALIFORNIA: Merle Park and San Francisco  
COLORADO: Denver  
TEXAS: Dallas  
UTAH: Salt Lake City  
WASHINGTON: Spokane

Canadian Topo maps are from:  
Map Distribution Office  
Dept. of Mining and Technical Surveys  
615 Booth Street  
Ottawa, Ontario, CANADA

Maps cost \$06 each and U. S. G. S. provides an index map of any state free.

from:  
Map Information Service  
U. S. Geological Survey  
Department of the Interior  
Washington, D.C. 20240

## From Moe Armstrong

This is my third year in new mexico, the second year just living in national forest, in wicklups, this year its more like a lodge 36 feet long, 8 feet high, the ranger leaves us, (we keep a "Model camp") and we get a jeep truck.

Moe Armstrong  
Vallecitos, N.M.

the river  
running south  
running brown  
running south  
sun setting  
on brown  
turning  
clouds  
golden  
(rays like) alancs  
the valley  
the river  
into the  
the clouds  
all turn  
into a  
feather  
and drift  
towards me



The Last of the Mountain Men

*sylvan hart lives on the river of no return, the north fork of the salmon in idaho, he's been there a few decades. he builds his own tools, grows and hunts his own food, wears buckskin, has a college degree, and built a bomb shelter. harold peterson went to visit sylvan hart, and wrote this book about him. a couple of friends of mine went to visit sylvan hart, to make a film of him. turns out they didn't like him. that shouldn't say anything about the book. i'm hoping sylvan hart isn't the last of the mountain men.*

-j.d.

The Last of the Mountain Men

Harold Peterson  
1969; 156 pp.

\$0.95 postpaid

from:  
Tower Publications  
c/o Macfadden-Bartell  
205 E. 42nd St.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG



The guns with which Buckskin bags his trophies, trinkets, and trousers have aroused considerably more awe than that. One handmade flintlock rifle, a particularly enviable product of loving craftsmanship, so excited a wealthy Los Angeles businessman that he offered \$500 for it. "It's not for sale," Bill told him. The rich Angeleno, offered \$750. "It's not for sale," Bill repeated firmly. By this time, the man, used to having his money count, was sorely vexed. "\$1,000," he snapped. "It's not worth it, but I want that rifle." "It's not for sale," Bill said, as calmly as before. The Angeleno left in a terrible temper. A week later he was back with a blank check. "Fill it out for whatever you want," he barked. "It's not for sale," said Bill. "Damn it," said the man. "You need the money. You do use money, don't you?" "No," said Bill. "Not where I live."

The rifle in question has a beautifully hand-bored, hand-rifled barrel, a mechanism with double cock and double-set trigger, and an ornately carved mountain mahogany stock. Bored to .45 caliber, the barrel is Swedish jackhammer carbon steel, which he had sent in to him.



*Sylvan's pole bridge, pinned precariously to the sheer face of a cliff high above the rolling River of No Return, constitutes the only path to the outside world.*

Although accurately described by Buckskin as "a rotating helix drive by fingers on a headblock nailed to a table top," the machine used to make that rifle scarcely seems sophisticated enough to un-cork a pop gun. As for the handmade "rifling saw," which cuts the actual groove, that looks like nothing so much as a half-inch-long bit of scrap metal. Yet if Sylvan, looking down the barrel, can find a flaw, no one else can, and the rifle shoots with deadly accuracy. "It's nothing but muscle power," Sylvan says, "but I really lay into it. That cutter comes out of there smoking!"

With its light, steady touch, the firing mechanism is no less astonishing. "The interesting part is a pitiful little thing called a detent," Sylvan explains, taking a listener's comprehension for granted. "It causes the sear to ride over the half-cock notch in the tumbler."



*Each of these samples of his innumerable hammers, scrapers, punches, awls, adzes, gouges, and other implements was hand-made by Hart.*

Smother than roeswood, the stock was simply blackened with sulfuric acid and rubbed to its lustrous deep brown finish by rubbing with the palm of the hand. It's carvings variously depict an old mountain sheep resting its heavy horns on the ground while drinking, two rams fighting, and the exact defensive deployment of a band of bighorns being attacked by eagles.

"I just make one as I need it, but I don't like to spend less'n a year making a rifle," Hart said, opening the patch button in the stock to show the orange flicker feathers inside. They are used to flick dust and lint out of the mechanism.

pre in FORM

one of the worst problems that we (the MOVEMENT if you prefer) (the Back-To-The-Land Movement, if you prefer) have is the cost of land if you want to stay here (the United States of America) land on Oahu is selling for five bucks a square foot, land in Montana, about two hundred an acre, in small pieces, if you are lucky, preinform gets past that bother by advocating that we forget that people, the governments, own land, and, just go live somewhere, bit by bit, dig a tunnel, get ready to move soon, figure on moving soon, forget, use, and live, freely, its kinda hard to say if these people will be there, but if they are:

-j.d.

pre in FORM

four issues: \$2.00

from:  
Pefrom  
Box 141  
Glendale, California 91209

Mountaineering: The Freedom of the Hills

*By far the most complete and sensitive treatment of mountaineering available. Oriented around Pacific Northwest mountaineering, where trails often end miles before the peaks begin, it is particularly relevant to wilderness camping and travel. It is much more than a book on how to climb. Reflects several generations of respectful relationship with mountains. If you move (or sit) where there are trees, rocks, snow and brush, it speaks to your terrain. One limitation: little about dry, arid areas--glaciers are the local functional equivalent of deserts.*

[Reviewed by Michael Templeton.  
Suggested by everybody.]

Mountaineering:  
The Freedom of the Hills  
ed. Harvey Manning  
1960, 1967, 485 pp.

\$7.50 postpaid

from:  
The Mountaineers  
P.O. Box 122  
Seattle, Wash. 98111

or WHOLE EARTH  
CATALOG

Matresses often give a chill sleep on snow due to interior convection currents, and with age they develop leaks that let the sleeper down in the middle of the night. Convection can be reduced by inserting a few duncans of down in this case a filter is needed on the inlet and the mattress must not be blown up by mouth because of the moisture thus introduced. Sheets of foam plastic are superior in every respect except their incompressibility and consequent bulkiness.

In recent years many a mountaineer has developed the habit or hobby of not only making his own passage invisible but of spending extra effort to obliterate evidence of his predecessors--most of whom were just ignorant and thoughtless.

If a skirmish with brush must be accepted there is no technique at all. Brushfighting is not a diversion for civilized, gentele folk. One cannot afford charity toward slide alder or devil's club; one must hate and punish and kill when possible.

The irregularity of a mountain range tends to break up a front, especially the narrow turbulence zone of a cold one. Instead of advancing in a solid line it may surge forward up a deep valley while held stationary by a high massif, this bulge perhaps being attacked by flanking air--little squalls breaking off and wandering about apparently at random. A party on one peak may experience lightning, hail, driving snow, pouring rain, and calm snow on all within the space of an hour. On a nearby peak another party may spend the entire day undisturbed by so much as a drop of rain, using up all their camera film shooting the superb cloud structures.



The quest of the mountaineer, in simplest terms, is for the freedom of the hills, to be fully at home in the high wilderness with no barriers he cannot pass, no dangers he cannot avoid.

COOKING AND EATING UTENSILS

The least-expensive cooking utensils are tin cans in various sizes, junked (at home, odd) in the mountain when rusty. Aluminum utensils cost a little more but are more durable. Bails are desirable for suspending pots over the fire, and lids to keep ashes out and steam in. Aluminum foil is versatile beyond description, under adept manipulation becoming a frying pan, oven for baking foods in a bed of coals, reflector oven for biscuits, and if need be even a cup or a pot.

BREAKFAST

If the climb begins in the middle of the night, breakfast is merely the first installment of lunch. A tiny can of fruit cocktail, or a doughnut and a swallow of milk, are typical menus. Some climbers are convinced their legs won't work without hot food; their neurosis can be quickly pampered with instant cereal or cocoa cooked by chemical fire.

LUNCH

As soon as breakfast is completed the climber commences lunch, which he continues to eat as long as he is awake, stopping briefly for supper. He has food in his rucksack and knick-knacks in his pockets, main courses for the summit lunch, nibbles for rest-stops, and sweets to snack while walking.

## Summit

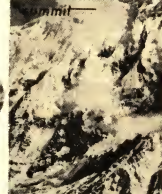
The only monthly magazine published in the U. S. devoted to mountaineering fortunately covers all phases. Articles range from accounts of "trips" in Nepal and even more remote areas to logs and descriptions of spectacular climbing achievements. Of special interest has been their publication of good medical articles pertinent to conditions such as altitude, cold, and fatigue

[Suggested and reviewed by  
Drew Langsner]

## Summit

\$6.00 a year (10 issues)

from:  
Summit  
Big Bear Lake  
California 92315



The deadly effects of hypothermia are primarily circulatory and cardiac, with rather characteristic electrocardiographic changes, and the secondary pulmonary vascular congestion and pulmonary edema tends to simulate the entity of high altitude pulmonary edema, with foaming at the mouth. Hypothermia is generally considered to exist when the body temperature, rectally, falls below 96° F., with degrees between 90-95° F., requiring only vigorous supportive care, while temperatures below 80° F., require immediate and sometimes heroic medical treatment. In the infamous Dacheu experiments on seven unanesthetized healthy human subjects intentionally chilled in ice-water, death occurred between 75.2-84.2° F., with an average value of 80.6° F.

## Mountain Safety Research Newsletter

When you are in the outlaws area of the mountains—on rock and snow—you want tools that will break after you do. Mountain Safety Research, Inc. is an organization that tests climbing gear and where it finds a need, designs and manufactures new equipment. It was founded by inventor-manufacturer-climber Larry Penberthy when he realized that much too of the gear on the market was shoddy. It is the closest thing to a testing service for mountain equipment that exists.

Working through existing channels in Seattle mountain climbing circles provided little support and a good deal of resistance so Penberthy started his own organization.

At any rate, Mountain Safety Research has turned up some disturbing things: carabiners and ropes that broke before their rated strengths, pitons made of metal with the grain running the wrong way, and ice axes of insufficient strength. For lack of another outlet, Mountain Safety Research retains its own design of pack and frame, process-your-own nylon ropes at below retail costs, ice axe shaft reinforcements kits, and other items.

[Suggested and reviewed by David Sucher]

## Newsletter and Catalog free

from:  
Mountain Safety Research, Inc.  
531 South 96th Street  
Seattle, Washington 98108

MSR BODY HARNESS



## East Coast Mountaineers

The Appalachian Trail Club offers a number of Trail guides, and maps of interest to New England hikers, climbers, and backpackers. The guides and maps are accurate and easy to read. The size of these books (approx. 7" x 6") make them handy to carry on trail. Some maps are available in a weather resistant material.

Available from:

Appalachian Trail Club  
5 Joy St.  
Boston, Mass.

The Appalachian Trail Conference also publishes a few booklets and guides. The guides cover the entire length of the Appalachian Trail. Personally I prefer the A.M.C. guides for the A.T. in New England. The booklet Hiking, Camping, and Mountaineering Equipment lists over 400 items, including foods with descriptions, weights, suppliers (domestic and foreign), and prices.

Available from:

Appalachian Trail Conference  
1718 N. St., N.W.  
Washington, D.C. 20036

Anyone interested in hiking or backpacking in New York State can get information from the Finger Lakes Trail Conference. Believe it or not there is still some "wilderness" left in N.Y. This organization is made up of various trail clubs, all are active environmental conservationists.

For info: Mr. Ervin H. Markert, Trail Chairman, Pittsford, N.Y. 14534.

Jack F. McKee  
Antirrh, N.H.

## Manual of Ski Mountaineering

If you want the wilderness to yourself, go where it's high when it's cold. This book is a fine compendium of the technical knowledge you will need to make it.

—SB

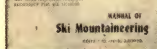
(See p. 270)

## Manual of Ski Mountaineering

David Brewer, editor  
1962, 1969; 232 pp.

\$4.95 postpaid

from:  
Sierra Club  
Mills Tower  
San Francisco, California 90013  
or WHOLE EARTH CATALOG



Two-step—One of the most useful maneuvers for attainment of speed on the level or on slight downhill gradients is the two-step, which uses the gliding ability of ski. If the two-step is to be used for long, it must be deliberate and rhythmic, slow enough to let the skier relax during the glide between thrusts.

Take a short step for propulsion, lean well forward from the waist, placing the poles well ahead, and lunge into a glide on the opposite ski by shifting the propelling thrust smoothly from the driving ski to a strong followthrough with the poles. Slowly bring the driving ski alongside the gliding ski in preparation for the next short step. Occasionally two consecutive short steps are taken to change the glide from one ski to another (this constitutes the three-step), and to tire out a new set of muscles.

Lightning and the mountain.—The urge to know more concerning the effects of lightning becomes stronger when one is on a peak with the static charge beginning to make its power felt. When every projection in the vicinity, and finally the climber himself, begins to spark and the air is filled with ominous hissing, the desire to be in camp becomes overwhelming. Since this desire cannot always be satisfied, it is well to know what to do at this time.

The reasons behind the classical warning to be off the summit and ridges in a lightning storm can be seen when the mechanics of the lightning discharge are studied.

## Mountaineering Medicine

It is small enough to carry any time you go into an isolated or hazardous area; well organized, and fairly up-to-date. There are sections on various injuries, snow blindness, bites and stings, sunburn, water purification, etc. The book concludes with a section on making and using a first aid kit. (You'll need a physician to write 'scripts for certain drugs listed.)

[Suggested and reviewed by  
Drew Langsner]

Mountaineering Medicine  
Fred Darvill, Jr., M. D.  
1966, 1968; 36 pp.

\$1.00 postpaid from:  
Skiatit Mountain Rescue Unit  
P. O. Box 2  
Mt. Vernon, Wash. 98273

## Chouinard Equipment for Alpinists

Almost everyone who goes into the mountains eventually develops an urge to try rock scrambling or climbing of some kind. It is therefore important to be aware of the best safety procedures and climbing aids available.

Alpinists Yvon Chouinard and Tom Frost design and fabricate a high quality selection of modern climbing equipment. Along with descriptions and illustrations of gear, their definitive catalog includes sections on history, use, care and precautions. There is even a beautifully illustrated article on ice climbing.

[Suggested and Reviewed by Drew Langsner]

## Catalog

free

from:  
Chouinard  
P. O. Box 150  
Ventura, California 93001



## Fundamentals of Rock Climbing

Sure enough, the working basics.

—SB

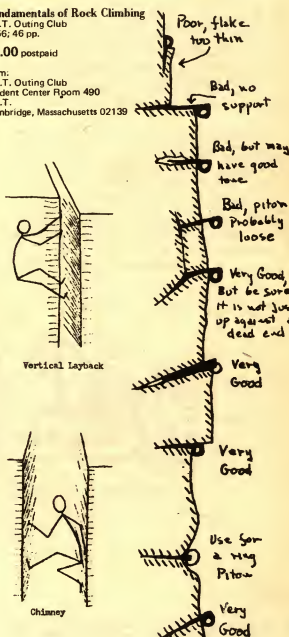
[Suggested by  
Neil & Lorraine Wolf]

## Fundamentals of Rock Climbing

M.I.T. Outing Club  
1956; 46 pp.

\$1.00 postpaid

from:  
M.I.T. Outing Club  
Student Center Room 490  
M.I.T.  
Cambridge, Massachusetts 02139



THE BEAST OF THE SEA

Or thought he did anyhow. It sure was wild not to know for sure. Half of D.R. was very deep sleep. It was his other half he wasn't sure about. He didn't know if what he felt around him as he lay there on the mattress, and saw, quite clearly, through the windows by the road outside, was in the actual, walking world or just a dream his sleeping half was having. D.R. felt his body rolling back and forth from side to side as Uge learned into the curves, then straightened up again. He heard Uge's motor whining underneath, and smelled the odor of Estelle in the mattress he was lying on. That was what he felt and heard and smelled. What he saw through the windows was the dark, lit by eerie light from slag heaps burning in a dozen different places. He saw sulphuric smoke rise from scattered fires and spread across the landscape of the night. He saw hulks of abandoned automobiles strewn about like monster corpses on some prehistoric battlefield, and he saw coal tipplers by the highway like preying creatures for whom the sudden glare of light. Animals darted off the highway as the bus approached, then gathered on the pavement when they'd gone by to stare with shining, yellow eyes. In one place the road was lined with monsters grinning wickedly. Some were merely bloody heads mounted on fence posts, or hanging by the hair from limbs of trees. Some stuck out their tongues that turned to snakes that hissed and snapped and bit as they drew by. He saw a beast from the depths of the sea, covered with weeds and jewels silent except for its head, which was adorned with intricate that glinted in the light from its own winking eye. On the beasts' heads were seven horns, and crowning each horn in rays of light was Estelle's face, distorted by a grin as wild and so knowing D.R. shuddered and pressed his face into the mattress thinking surely I'll wake up now, surely this is just another dream.



## Breaking and Training the Stock Horse

Most books on, and methods of, training the western type riding horse are a collection of anecdotal tricks and clever gimmicks with which you may force or frighten the horse into doing what you have in mind. Mr. Williamson's is not.

It is a concise, orderly, and complete explanation of how, with minimum paraphernalia, to condition the horse to interpret the most subtle movements and pressures of the legs, hands, and entire body and to turn these commands into movement with the freedom and ease of an unmounted horse. A horse well trained by this method can easily be ridden without a bridle. Williamson's method develops discipline and sensitivity in the trainer as well as in the horse.

Although intended primarily for the stock horse, its basic training principles can be applied to the training of any type of riding horse, including hunter, jumper, gaited, and high school dressage. There are also chapters on horsemanship, riding, and riding a bucking horse.

Mr. Williamson has been occupied with horses all of his life—the Cavalry in the First World War, running pack outfits, catching wild horses, and training and exhibiting. He now conducts a school in horse training and horsemanship in Hamilton, Montana.

[Suggested and reviewed by Paul Bandy]

Breaking and Training the Stock Horse  
Charles O. Williamson  
1969, 123 pp.

\$8.50 postpaid

from:  
Charles O. Williamson  
Hamilton, Montana 59840

or WHOLE EARTH CATALOG

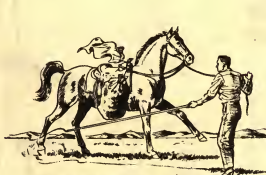


Contrary to the usual idea little equipment is necessary in the proper training of saddle horses.

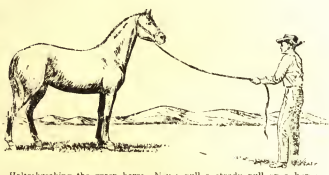
A horse responds to training to relieve pressure on some part of his body. He follows you when you are leading him to relieve pressure on his poll. He goes forward when the legs are used to relieve pressure on his sides. He stops or slows when the reins are pulled backward to relieve pressure on his mouth. When he does what you want, if you do not slack and relieve pressure, he has no incentive to do the same thing again for you and finally gives up in disgust and carries you about in a listless or even defiant manner because he must.



The running W



Work on the longe line. Teaching the green horse to listen to and obey the trainer and not to fear artificial lead to the saddle.



Halterbreaking the green horse. Never pull a steady pull on a horse whether mounted or working from the ground. Pull and slack. Stay slack when the horse is doing what you want.

## Horses

When handling horses there is no substitute for experience, but this book is as close as you can get. In the first 115 pages the author presents encyclopedic information on all phases of horse management. The last fifty pages are devoted to a brief discussion of eastern riding and showing.

[Suggested and reviewed by Michael S. Kaye]

Horses: Their Selection, Care and Handling  
Margaret Cabell Sell  
1943, 170 pp.

\$5.95 postpaid

from:  
A. S. Barnes & Co.  
Box 421  
Cranbury, N. J. 08512

or WHOLE  
EARTH  
CATALOG

### V. FIRST AID

Accidents and injuries—Treatment of lameness due to injury—Lameness due to wounds or infections—Lameness due to chronic condition or disease—Wounds—Treatment of common illnesses—For the medicine chest

### VI. HANDLING THE HORSE

General characteristics and temperament—Fundamental rules for handling and controlling in the stable—How to lead—How to back out of a stall—Working around a kicker—Catching a horse in pasture—Bridling and saddling

### VII. CAUSE AND CONTROL OF VICES

Stable Vices: Cribbing—Tearing the blanket—Weaving—Crowding—Kicking in the stall—Backing out of the stall suddenly

Other vices: Kicking while under the saddle—Kicking while being mounted—Biting another horse—Charging in the pasture—Rearing under the saddle—Bolting—Shying—Refusing to leave his companions, or to leave the stable alone—Eating grass while under the saddle—Shying out at jumps—Getting overexcited at jumps

## Practical Western Training

In an area where most of the horsemastership does not come from the horses, *Practical Western Training* is a refreshingly useful and sensible book. Dave Jones is a working western horseman and he gives the reader the benefit of years of successful, practical experience. Most important he treats the fine line between senseless counter-productive brutality and letting the horse run the whole show.

[Reviewed by Michael S. Kaye]

*Practical Western Training*  
Dave Jones  
1968, 176 pp  
OUT OF PRINT

Van Nostrand  
Reinhold  
450 East 53rd St.  
New York, N. Y.  
10001



Colt backing in draw reins. This is very good, for the pull is low. It's easy for a colt to back if his head is low, almost impossible if he's "star-gazing." Notice that Ken has his weight off the seat, which allows the horse to back fast and straight.

Some guys "knock and spur" a handle on their horses; that's one way. You won't find that kind of stuff in this book. Sure, sometimes you have to get a little rough with a rough horse, and I'll tell you how to do this. But I won't tell you how to beat up a horse.



LEADING A HORSE

With neither bridle nor halter. Grasp the horse's forelock in the right hand and put your left hand on his muzzle over the nostrils. It is the latter which will give control if he tries to pull back or jerk away. Slightly pinching the nose just above the nostrils will distract his attention. With a mean, stubborn animal you may have to pinch hard enough to close the air passage. A horse cannot breathe through his mouth and will soon give up if his wind is cut off.

### I. SELECTION OF THE HORSE

Familiar breeds of horses, how they came to be developed and for what purposes they may be used—Where to buy your horse—Tests for soundness

### II. SELECTION AND CARE OF EQUIPMENT

Types of saddles and bridles—Grooming tools and other stable equipment needed—Harness—Types of vehicles—Care of tack

### III. THE STABLE

Location—Materials—Dimensions of stalls—Flooring—Stable accessories—Ventilation and lighting—The tack room—The hay loft—Paddocks and pasture—Converting a garage

### IV. GENERAL CARE

Principles of feeding and watering—Amounts and kinds of food necessary—Cost—Amount of time needed—Bedding—Grooming—Shoeing—Clipping—Vanning—Methods of tying

## Horses, Hitches and Rocky Trails

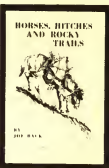
Right. You got your land fifteen miles into nowhere from the nearest road. You deplore noisy trail bikes and ATVs, and you can't afford a helicopter. Then you're into packing. Joe Back is a packer, and talker, and illu-  
trator, and he can help you.

—SB

## Horses, Hitches and Rocky Trails

Joe Back  
1959, 117 pp.  
\$4.00 postpaid  
from:  
Swallow Press  
1139 South Wabash Avenue  
Chicago, Illinois 60605

or WHOLE EARTH CATALOG



## The Spanish Mustang Horse

For anyone who needs a good, tough, dependable, intelligent, quick, sure-footed, little horse, the Spanish Mustang is the answer.

The horse of the Spanish conquerors, Indian pony, and original wild horse has suffered as bad a fate as his native American masters. Castrated, crossbred and shot for dog food, he is almost extinct. There is now a registry, founded by Bob and Ferdinand Brislaw, for the preservation of the mustang horse. Most of the foundation stock was caught wild in remote areas or found on Indian reservations.

They are small horses (12 to 14.2 hands). Their speed, endurance, and ability to withstand hard winters on little food is legendary. One Mustang, Yellow Fox, won the 100 mile Bitterroot, Montana, endurance ride at age eighteen. They come in conventional colors—bay, sorrel, black, chestnut—and in many others—blue and red roan, medicine hat, blue, blue-cream, buckskin, claybank, overo paint, steelcut, ...

Regarding horses and ecology. When cars first came in, everybody said, "At last our streets will be clean and safe." As horse tracks dropped off, the English sparrow population was drastically reduced.

—SB

## Horse Freaks of the World...

As you may well realize, our planet is becoming foul. An answer, perhaps? Horses, manure is better than pollution. I have noticed that many a freak has realized that the horse sometimes proves himself better than the car, and that his neck can be kept cheaper than a car, on the whole, they are really more economical.

As a horseowner and a freak I am aware that many a freak has more information at hand, and the books dealing with horses don't really go into the aspects of horses vs. the people that really appreciate the horse, more than the red neck thinks he does. Anyway, all the books you can find on the subject have a minimum requirement for owning horses; at least an annual income of \$9000 or more. But this isn't necessary. There are secrets one cannot find over night in owning horses, but, if anyone would like to try they are more than welcome to write me, and I am sure, if I can get it all together, I can help them take care of their horses on a minimum of \$5 a month, and have them take care of them well (a sick horse is no horse at all, remember.). To repeat, if anyone would like some enlightening answers to some puzzling questions concerning the freak and the horse, living compatibly together, do write.

Love,  
Gail Lusk  
P.O. Box 802  
Idaho Springs, Colorado 80452

P.S. In case you have any doubts about my qualifications, I used to be a Texas red neck that rode barrel racing rodeo routes. Enough.

If you can, pick a good short-backed horse, thick in the body, with strong sturdy legs. A long-pasterned horse cripples up faster than one with short pasterns. You'll find a lot of thin, spindly-legged ponies that'll pack OK, but they don't stand up well. Too heavy, and too big horses slow you down and are not agile. About a 1200 lb. horse is just right for weight, although lots of smaller horses are used and stay right in the ring. The Morgan type is the boy if you can pick and choose, but don't get too choosy or you'll never get to camp.

If you don't balance each load, it's your hard luck. The handiest and cheapest tool you can buy is a fairly accurate spring or other scale that will take weights up to 100 or 150 pounds. It will last for years and you'll always use it. Some people like the style with a hook at the bottom and a ring or handle at the top. Seven or eight bucks for one will save you and your outfit a million dollars worth of grief.

Balance the two sides of each pack, be sure they weigh the same, whether they're panniers, side packs of any kind, manted cargo, bedrolls, tents, or any daggoned ordinary pack you load.

Manila is the stuff. Most people, including me, like good manila rope for both pack and sling ropes (sling ropes 3/8 inch diameter, lash ropes 5/8 or sometimes 3/4 inch diameter). A good many times you will use a lash rope also for a picket rope, and will want it big for safety). Of course, you can use steel, which is cheaper, and I think much weaker and less durable than manila. Cotton is good, but boy! when she gets wet and frozen you need a hacksaw blade for your knots. Nylon is a ballbreaker's dream, and say, Bud, try to solve one! Besides, you've seen the ads praising the stretch in midlady's nylons; it's so, it never stops, you can't keep it tight.



Kamawi, No. 115, black stallion

"His qualities are complete. Now he looks accurate; now to be losing the way, now to be forgetting himself. Such a horse prances alone, or rushes on, spurning the dust and not knowing where he is."

Chuang Tzu, Book XXIV, Part III, Section II, J. Trans. James Legge

They make good pack, cart, children, saddle, or even light plow horses. Mustangs are priced from cheap (\$100 to \$150 for a registered colt) to expensive, depending on the breeder. Most breeders are old-timers and reasonable. We bought three last year in Wyoming and are very well satisfied. They are remarkably fast learners.

(Suggested and reviewed by Paul Bandy)

For information and breeders list write:

Information Headquarters  
Bob Racicot, Exec. Secretary  
Box 26, Thompson Falls  
Montana 59737



IN THE FLESH

But it was not a dream. Those were really baasts outside the windows, and that was really David, sleeping there beside him on the bed. D.R. felt as if his blood was full of methedrine. Something racing through his mind increased its speed so much it disappeared completely out of sight. The half of D.R. that was sleeping was a separate, living person! It was really David, sound asleep beside him, like a child. Surely it's a dream, he thought. Surely that's me sleeping, and all of this I'm seeing is a dream. D.R. leaned up on his elbow and looked around. He breathed deeply, and smelled and listened. Ure's motor whirled beneath him, Estelle's odor rose into his nostrils from the bed. Virgil was up front at the steering wheel, guiding Ure around the curves, shifting gears from time to time, driving slowly. The world inside the bus was still in place. And David was a living person in it with him, lying there before him in the flesh.

Is he really in the flesh? D.R. wondered. Is that really David there beside me, or are we somehow mixed up in each other dreams?

Touch him, D.R. thought. Touch his face and feel if it is breathing.

Don't touch him! D.R. told himself. Let him lie there, don't! With the tips of his fingers D.R. touched David just below the lobe of his left ear. David stirred and smiled with pleasure, he yawned and stretched and opened wide his eyes. When D.R. started whimpering David touched his finger to his lips and whispered shhhhhhh. He was sitting up now, looking deeply into D.R.'s face. Moving very slowly, David leaned and placed his head on D.R.'s shoulder. Don't be afraid, he whispered. I love you, and you mustn't be afraid. David kissed him then, he kissed him on the neck and lightly on the corner of his mouth. Then he took D.R. by the shoulders and pressing tried to stretch him out full length upon the mattress.

"No."  
"Shhhhhh," David whispered.  
"I don't care. I don't feel like lying down."  
"What's that you say?" Virgil called out through the car.  
"I said I don't much feel like lying down."  
"Well," said Virgil, "It's just as well. I'll be getting out in another mile or two."

## Sioux Indian Saddle

I noticed you had a section on Horse books in the Spring catalog and thought you might be interested in the saddle we make. This type saddle was used by plains Indians warriors and is very practical. It is much lighter, cheaper, and more comfortable than a western saddle which was designed for roping cows more than for riding. It is made by hand of high quality materials and is very durable.

Your readers might also be interested in buying a product made by members of a rural crafts co-operative rather than more exploitative type factories.

These saddles retail for \$40 postpaid or \$30 for three or more. They are available in rust, dark brown, cedar, or beige colors.

Huw Williams  
Tolstoy Farm Handcrafts  
Davenport, Washington 99122

Sioux Indian Saddle—Suede cowhide, padded with thick foam-rubber. Adjustable cinch stirrup leathers of harness leather comes complete with cinch and stirrups. More comfortable for horse and rider than any other kind of saddle.





Todd's  
good heavy chippewa boots and shoes.

Catalog  
free  
from:  
Todd's  
5 South Wabash  
Chicago, Illinois 60603



PLAIN TOES  
OUTSTANDING VALUES

Durable oil tanned water repellent leather, drill lined vamp, molded corners, protective hard toes, long-wear Goodyear welt outsoles and heels.

Brown & olive sizes, 8 1/2, 8 3/4, D 6-15, E 6-14, EE 6-14, EEE 7-13.  
Also 8 1/2 & 8 3/4  
C 6-10 C 6-10 C 6-10

DARK OLIVE, lightweight Neoprene cushion crepe soles  
No. C 6303, 8 1/2 inches overall, 7 1/2 inch tops ..... \$22.95  
No. C 6063, 6 1/2 inches overall, 5 1/2 inch tops ..... \$22.95  
CEDAR BROWN, Heavy duty non-skid cork & rubber soles  
No. C 6300, 8 1/2 inches overall, 7 1/2 inch tops ..... \$22.95  
No. C 6060, 6 1/2 inches overall, 5 1/2 inch tops ..... \$19.95

White's Boots

White's Shoe Shop has been making hand made shoes for as long as I can remember and I say this because my Father wore them for 40 years, in every condition the Pacific Northwest has to offer, he always had three pairs at once rotating them to dry when wet also one of the pairs were elk tanned for summer. We Condras have always taken care of our feet and White's shoes are the best bar none. I've had at least one pair on hand since my first stop growing. The pair I have now No. 275 "Smoke Jumpers Shoe" are going on three years old, and will go more as long as you sole them etc. They aren't cheap, but if you ever spent \$30.00 for a pair of shoes and only had them last a year, you'll find them a bargain in the long run. I've fought a lot of forest fires and good shoes on your feet are as much a necessity as a shovel or pulaski in your hands - if you have hard or very hard to fit feet they make shoes for you too. A nice little catalog and all the help you need with OLD fashioned quality and service.

[Reviewed by Joseph Condra.  
Suggested by Daniel Vichorek]

Catalog  
free

from:  
White's Shoe Shop  
W. 430 Main  
Spokane, Washington 99201

No. 375—Vibram  
8-inch top—Black, greased upper  
The "SMOKE JUMPERS" Shoe

\$59.75

Jungle Boots

An excellent product, especially for those engaged in any kind of heavy outdoor labor, is the jungle boots originally made for the U.S. armed forces. These canvas and leather combat boots can be found in surplus stores for about \$12 to \$15 a pair, and about a third of that price used. Many used ones are in excellent condition, but even the ones in poor condition will last a very long time. I worked for the highway dept. last summer, along with a couple of other college students. They bought normal leather work boots for about \$15 and \$20 while I bought a pair of jungle boots in good condition. Both my friends wore out their boots. I can detect no wear on mine and am saving my pair for next summer, or whatever. I highly recommend this product to hikers also.

Jungle Boots Price: \$15 New, \$3-6 used.

—J.A.

G.I. Vietnam Jungle  
Combat Boots

AVAILABLE AT LAST / Genuine U.S. Government Issue Vietnam jungle, vibram soled, ghillie proof. This is the same boot currently being issued in Vietnam. No better boot made at any price. Great for hunting, fishing, hiking and canoeing. Satisfaction guaranteed. Please state shoe size and width (narrow, regular or wide).

ONLY \$9.95 please add \$1.00 postage.

GOLDEN STATE SURPLUS

524 W. Main St., Alhambra, Calif. 91801  
Shotgun News, p. 276

260 Boots  
Nomadica

CHIPPEWA RUGGED  
ENGINEER & CYCLE  
PULL-ON BOOTS

Famous Chippewa quality.  
Extra strong and sturdy.



Premium heavy duty BLACK oil tanned water repellent leather, specially reinforced one piece tops, protective leather heel guards, heel supporting molded corners, tempered steel reinforced shanks, sturdy sweet resistant insoles, heavy duty leather midsoles, superwear Neoprene rubber outsoles, 1 1/2 inch heels.

No. C 4666, soft toes, 11 inch tops. Men's sizes 8 1/4, C 8-14, D 7-14, E 6-14, EE 6-14, FROM STOCK ..... \$24.95  
No. C 7863, steel safety toes, 11 inch tops. Men's sizes C 8-13, D 6-13, E 6-13, EE 7-13, FROM STOCK ..... \$30.95  
No. C 493, soft toes, 16 inch tops. Men's sizes 6 thru 14, B thru EE width, MADE TO ORDER ..... \$52.95  
No. C 493-5, steel safety toes, 16 inch tops. Men's sizes 6 thru 14, B thru EE width, MADE TO ORDER ..... \$54.95



No. 75

8-inch Black

No. 75—Best Quality Calked Logger.

PRICE—Page 16 \$45.75

UPPERS—Best black Kip obtainable.

SOLES—First Selection Calking Leather.

HEELS—High, set ahead, supporting the Arch.

ARCHES—Very Strong.

In stock calked only. Can be made without calks on short notice.



No. 890

8-inch top

"PACKER'S SHOES"

PRICE—Page 16. \$45.75

LEATHER—Brown Elk.

SOLES—Heavy Single Oak.

HEELS—Rubber, 1 1/2 inches high but a little wider than the cowboy's heel.

ARCH—High and reinforced.

TYPE—Hand Sewn, Stitchdown.

USE—Designed for Riding and Walking. A shoe that fills a long-felt want.

(Not suitable for calks)

Woodman's Pal

A tool for clearing brush, where an ax is dangerous, a saw is tangled, and clippers are too small.

—SB

[Suggested by Robert Hanus]

Oley Tooling Inc.  
122-26 Main St.  
Oley, Pennsylvania 19547

Good Boots

Loggers, construction workers, and foresters in the Pacific Northwest need rugged boots with good grip to endure a lot of rough going. One of the boots often used by these men is the 210V boot by the West Coast Shoe Company, Scappoose, Oregon 97056. This company's boots are carried by stores in the Pacific Northwest and can be ordered by mail from catalogue. The company will send measuring instructions on request.

The 210V boot fits the foot with firm support. The boots are carefully constructed of high quality leather which is tough but soft. The leather keeps its shape and dries soft after being wet. The quality of the leather is one reason these boots keep their fit and stay comfortable while giving long service.

The 210V Boots have Vibram lug soles. It costs \$32. Those who have worn boots with Vibram lug soles know the great traction which these soles develop. The rubber compound has a high coefficient of friction and cling to both wet and dry surfaces. The lugs give good bite on loose surfaces. Vibram lug soles get work done with less effort. They make hiking and climbing easier, safer, and more enjoyable.

The woodman's heel is well undercut so that when a step is taken and the heel is put down the force is through the center of the ankle joint. A large flat heel produces a force behind the center of the ankle joint which must be resisted on each step by muscles in the front of the leg which is tiring.

A little care will provide a lot of wear. Mud should not be left on the boots as it will draw the oil from the oil tanned leather. An occasional rubbing with mink oil, also available from the West Coast Shoe Company, keeps the leather in good condition.

R.C. Engle  
Sioux City, Iowa



Gokey

Gokey Company is in St. Paul, Minnesota. They sell junk like Abercrombie's and those mail order places and they sell custom made (hand made) (machine made with hands) shoes (and the other kind too). They sell Walabes (which is another story). But lately they sell fewer of their own make shoes, which is a shame, there are fewer men around who can do hand sewing and that's essential to Gokey's shoes, which are the most comfortable thing I've ever owned. I walk a lot. On city streets. I've gone through every type of shoe from \$150.00 Loeb to \$25.00 Vibram (and yes, that's another story) to Hornum's work shoes to climbing boots & cowboy boots and finally, heaven, comfortable shoes. And besides there being fewer men around who can sew, the demand is outstripping what the available men can supply.

Gokey seems to have found the economic mean between a mass produced shoe and the hand laced shoe. It works. They also make make good boots to measure. Testimonial. The important thing, however, is as Gokey says, to get more people who can work leather. This should be a fantastic opportunity... why isn't it? Or is it? It is!

[Reviewed by Ron Williams.  
Suggested by Arthur Brand]

Catalog  
free

from:  
Gokey Co.  
21 W 5th St.  
St. Paul, Minnesota 55102

GOKEY BOOT SAVVAGE PULL-ON BOOT

For Men and Women

This Gokey Boot Savage mail order place is appreciated by sportsmen who walk with a low-cut sturdy boot that can be put on in a moment for a quick walk ride, or any outdoor use where a service boot is required. Treasures may be better made worn outside of boots. Made to measure only. Delivery 4 to 5 weeks after receipt of order. Use the measure sheet in center fold of this catalog when ordering.

No. 3388 MEN'S G.B.S. PULL-ON BOOT Price ..... \$35.00  
No. 3358W WOMEN'S G.B.S. PULL-ON BOOT Price ..... \$35.00  
(Postal Post Shipping weight 5 lbs.)



No. 284-B2, in oxidized metal carrying sheath ..... \$19.95  
No. 284-CZ2, in canvas zipper carrying case with honing stone ..... \$23.95

## Craft Manual of North American Indian Footwear

moccasinmaking. the fellow who put this book together has saved a truckload of good information from being buried in family shooters around the world. thirty or forty designs and patterns set out, using length and circumference of whatever pretty foot to be shod. step by step instructions for stitching and assembly can be followed by anyone who can read and use a knife and needle. not recommended for people wanting heavy-soled fringed streetshoes or patent-leather leggings. meant for people who want to build north american indian footwear like the north american indians feet wore.

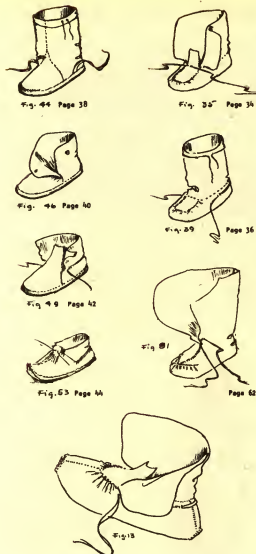
—Jd  
[Suggested by David Morris]

## Craft Manual of North American Indian Footwear

George M. White  
1989: 71 pp.  
\$1.95 postpaid  
from:  
Mission Valley News  
St. Ignace, Montana  
or WHOLE EARTH CATALOG

## Yellow Knives — "Center Seam"

- See general instructions.
- Special instructions as follows:
- Line L M = length of foot + 3/4" at heel + 1/2" at toe! See general instructions.
- A B measures circumference to tongue insert is equal to A B or (A A' = 1/2" width of tongue.)
- O K = 1/2 H K.
- Draw all measurements on foot tracing.
- Fold pattern on line L M and cut both sides symmetrical.
- See general instruction for tracing pattern on leather. Make two alike as there is no left or right.
- Fold leather inside out.
- Sewing: join H H' and sew to K K'. Use 1/8" stitching.
- Sew toe with 1/8" stitch, and turn outside out.
- Center (tongue) insert. See figure 12.1 on H H'. Use 1/8" stitch on insert and 1/4" on side piece as sides must be gathered.
- Sew leather either inside out, or right side out. (See heel detail)
- Sew on extensions. (see figure 4-a)
- Tie strings. See figure 4-b.
- See Figure 5 for cutting the strings.



## Sno-Seal

Sno-Seal is the most effective leather waterproofing I have found. It costs 1/2 as much as silicone sprays and goes twice as far. Also makes shoes warmer—leather when it is not wet will get cold as quickly as plastic.

Anderson & Thompson Ski Co.  
1725 Westlake Ave North  
Seattle, Washington 98109

P.S. It is not grease, it is wax.

Stephen H. Nuetzel  
Olympic Valley, CA



Nos. 1330, 1331 Sno-Seal

Nos. 1330, 1331 Sno-Seal. The famous original waterproofing for all leather goods. 1330 Large 8-oz can, suggested retail price, \$5.95 each. 1331 Handy 4-oz can: suggested retail price, \$6.00 each.



## Mukluks

Also a real "find" for snow country is the Canadian made mukluk (great for hunting, shoeing snow, etc., and just clomping around in) Buckhorn bottoms, canvas top, all waterproof. \$3.90 from  
Factory Surplus Distributors  
2300 Market St.  
Denver, Colorado 80205.

Jo Ann Aligors  
Sun Valley, Idaho

If you write to the Alaskan Chamber of Commerce, 127 S. Franklin St., Juneau, Alaska, they will send you a list of Eskimo village co-ops who make the authentic type of mukluks and walrus parkas, with beading and everything. By buying one of these you will be supporting their village economy and encouraging them to keep a dying art alive.

—Evelyn

## Walter Dyer Moccasins

A human rooster who makes tough moccasins.

—SB

Walter Dyer  
7 Bearskin Neck  
Rockport, Massachusetts 01066



## DOUBLE-SOLED BOOT

Great, stylish and long lasting. Hand-sewn lace-up boot — blended into a double thickness, with an extra sole put on: the hard, slow way — by hand! You will own the best money can buy — why settle for less?

Men's No. 969  
Price \$30.95  
Sizes 6-13  
Widths A-EEE

Ladies' No. 969A  
Price \$28.95  
Sizes 4-10  
Widths AAA-C

## European Shoes

**Buying Guide:** Sturdy clothes, good walking shoes, sleeping bags, rucksacks, etc., can often be bought for less than half cost by ordering from a regular sporting equipment house in Europe, even including postage and duty. Procedure: write for catalog for example to Sporthaus, Schuster, Rosenstrasse, Munich, West Germany (or find others by asking English, German, French and Swiss consulates, trade offices, embassies). Since catalogs come with many illustrations it isn't difficult to decipher languages once you know what you're looking for. Check with U.S. Treasury Department for information on amount of customs duty on that particular item desired. Sometimes the item will come in without any duty being charged, this is generally so on small items. You can send an ordinary American check made out in dollars; you need to know your size in the European system or send foot outline and American size and hope for best. Generally, European shoes are narrower in toes and wider in heels than American shoes.

John Christian  
Buffalo, N.Y.

## Kaibab boots

Kaibab boots are the real thing: traditional Indian desert moccasins. Made of deerskin and horseshide, they are light, attractive, and durable — just the right amount of improvement over bare feet. Unfortunately there are innumerable imitations of Kaibabs, all terrible. The giveaway is the seam between sole and top: if the sewing is visible on the outside the moccasins are frauds and will fall off your feet in a few weeks. Real Kaibabs will last six months of steady use, and when you finally come through the soles, you can send the tops to Tucson for new soles (\$12.00) and get another six months. (One warning. Kaibabs on wet slick sidewalk are sudden death.)

—SB



When ordering, send a pencil outline of your foot.

Kaibab boots  
\$19.95 mens  
\$18.95 ladies

from:  
Kaibab Buckskin  
271 North Stone  
Tucson,  
Arizona 85703

## Sole-Saver

Black glick you paste on the bottom of your shoes to make them last forever. Looks particularly useful for moccasins. We like it. I see one of the suppliers also recommends it for knee patches.

—SB

[Suggested by Leslie Schockner]

1/2 pint	\$2.25	from:
Pint	\$3.95	Carpet Products Company
Quart	\$5.95	Central Sales
		New York, N. Y. 10036

Manufacturer is Edward Schlosser Associates, Inc.,  
Ridgefield Park, N. J.



MAYBE VIRGIL LEAVES

At a junction where the road to Blaine came into 886, Virgil stopped the bus and got out, and D.R. crawled forward to sit behind the wheel. He offered to drive Virgil the three miles on into Blaine, but Virgil said he believed he'd rather walk. Light was in the sky now, but it was still a long time till Virgil's appointment at the welfare office, and he was just as glad to have three miles to walk to pass the time away. He thanked D.R. for the ride, and D.R. thanked him for getting the bus to run again, and driving as far as he had. They shook hands, and Virgil set out walking down the road toward Blaine.

Moccasins  
Nomades **261**



## Light Weight Camping Equipment and How to Make It

It's all here: design, patterns, assembly techniques, light-weight materials, and sources of the materials. Because of good information on what's needed for various environments, it's a useful book even if you aren't making your own stuff. An indispensable book if you are.

[Suggested by Roland Jacopetti]

-SB

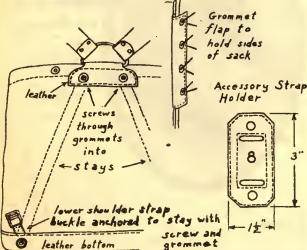


**Light Weight Camping Equipment**  
Gerry Cunningham, Margaret Hansson  
1969, 130 pp.

\$2.50 postpaid

from:  
Colorado Outdoor Sports Corp.  
5450 North Valley  
Denver, Colorado 80216

or WHOLE EARTH CATALOG



## Sleeping Bag Materials

Since you're finishing up I guess I'd better add something now.

About making sleeping bags--

*Light Weight Camping Eq. and How to Make It* is instructive but careful not to give you a design for anything that would compete with their own gerry's line. You have to make your own adaptations. The basic book is still helpful.

Goose down costs a fortune from the sources listed. Most feather suppliers don't want to see you unless you can buy about 100 lbs. of down. Sometimes quilt makers will sell however. I got mine at \$8 per lb. from:

J. Schachter Co.  
Allen St.  
N.Y.C.

(Gerrys charges \$19.50 per lb.)

Nylon material is very hard to find. I was astonished to find that almost all of the fabric centers in Syracuse had no idea of what type of fiber went into their fabrics, which were strong set. All they cared about was color! After scouring the Carmet district of N.Y.C. I happened upon a dark little store which sold "Mill Ends" or remnants. I found just what I wanted at half price--with a smile!

Fabric Export Co.  
45 Walker St.  
N.Y. 13, NY

Long zippers are hard to find--long zippers which are nylon and which open at both ends such as the Walldes zipper are extremely hard if not impossible to find. Walldes does not sell retail. I still haven't found a zipper but the sleeping bag (?) is so warm that I haven't needed one yet.

David Briars  
Syracuse, N.Y.

## Antarctic Products

The Antarctic Products mailorder brochure contains an assortment of very high quality but low cost cold weather items made in New Zealand such as sleeping bags, parkas, sweaters, sheep skin rugs, raw wool yarn, etc. The down filled products are by the makers of the bag Hillary and Tensing used on Everest and have been chosen for dozens of world expeditions.

The prices of the items are exceptionally low for the reasons mainly that they are either high in labor or raw materials both of which are very low in cost here by U.S. standards. Mailorder also cuts out the retail markup, the import agents fees and costs, also the New Zealand government subsidies exports (The identical sleeping bag costs \$14.50 more to buy in N.Z. than the U.S. mailorder price.

[Reviewed by Warren Hayward.  
Suggested by Dr. Henry Mayer

**262** Camp Clothing  
Nomads

## Frostline Outdoor Equipment

Frostline Outdoor Equipment is the manufacturer of do-it-yourself kits of lightweight camping equipment: tents, down sleeping bags and clothing. They also sell the raw materials for making such equipment (pre-packaged down; zippers; nylon fabrics; velcro self-sticking nylon tape fastener; Dacron thread; etc. The company's service by mail has proven prompt and dependable, all of this reviewer's orders having been filled correctly.

This reviewer has made Frostline's "Big Horn" ("Winter") sleeping bag (2 1/2 lb. down filled overlapping tube design with no stitched through seams), stuff sack and poncho. She found each kit to be all that the manufacturer had claimed, the catalog description scrupulously accurate.

Frostline kits are complete; all they require is assembly with a sewing machine. This reviewer used a Singer Featherweight for the purpose.

Before deciding on the Frostline kits, this reviewer compared Frostline prices and specifications with those of other companies. (The Ski Hut, Recreational Equipment Inc., Thomas Black and Sons Inc., etc.) She concluded that the Frostline kits were the most economical product without any compromise in quality.

[Reviewed by Roberta Becker Marshall.  
Suggested by many]

Catalog  
free

from:  
Frostline Outdoor Equipment  
P.O. Box 1378  
Boulder, Colorado 80302



\$18.50

Regular Weight: 16 oz.,\*\*  
No. W-10, \$7.95 Large Weight: 20 oz.,\*\*  
No. W-11, \$10.50



Total Weight 6 lb.,\*\*  
No. T-10, \$64.95

Weight 13 oz.,\*\* No. P-2, \$8.95



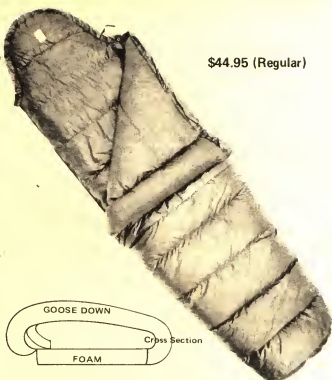
**SOUTH POLAR 2 PARKA**  
Down Filled

**PRICE \$30**  
Duty 91%

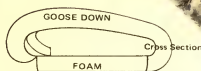
Catalog  
free

from:  
Antarctic Products Co.  
Box 223  
Nelson, New Zealand

A pure goose down filled ski and sporting parka with dacron filled sleeves to reduce bulk. Quilted down compartments prevent down drift. Heavy duty front zipper is two way. Pockets are zip closed. Ribbed wool cuffs and belt provide good heat loss stops. Jacket weight average 1 pound 10 ounces. Please give height, chest circumference and underarm to wrist dimensions when ordering men's and women's sizes. Colors black and light blue.



\$44.95 (Regular)



## Barbour

Here in California, Barbour all-weather gear looks hopelessly exotic. Appropriate dress for leaning against the straining helm or sneaking into East Germany in November and other romances. Outstanding for motorcyclists. Waterproof without condensation.

-SB

[Suggested by Jerome Skuba]



Catalog  
free

from:  
J. Barbour and Sons, Ltd.  
Simonside, South Shields  
Co. Durham, ENGLAND

Racing oversuit about \$27

blizzard helmet about \$3



## Warmlite Tent

The Stephenson Warmlite tent is the 2-3 man tent for backpacking and mountaineering. The basic Model 6—Single Wall Tent weighs 36 ounces complete with poles. It has been designed by Jack Stephenson, an aerodynamicist and mechanical engineer, who fabricates them as a part-time operation at home. The tapered hoop shape is very stable and doesn't flap in the wind. It also provides extra interior head room compared to conventional A-frame designs. Interior thermodynamics are designed to provide good ventilation and minimize heat loss. Length is over 10 feet, width of 5 feet. Fits in small size sleeping bag stuff sack. \$100-\$215.

[Suggested and reviewed by Drew Langsner]

## MODEL 6



INSIDE MODEL 8  
CHEWY — LAURA

## Catalog

free

from:  
Stephenson's  
23206 Harteras Street  
Woodland Hills, CA 91364

## Bishop Ultimate Tents

I have used the Ultimate 2-man tent & fly in a two week rain & snow spell in the Wind River Mts. It made the difference between two weeks of unpleasantness and two weeks of pleasure. When sealed, this tent will not leak and condensation does not form on the inner tent if the window is left open and the temp is above 30°. I have never before used a tent which was a joy to opposed to a hassle. As far as I am concerned, this is the tent for winter backpack camping or camping in unpleasant weather.

I have also used the 4-man Ultimate for camping out while on a ski trip. This is the tent for 2 people & ski equipment. I haven't tried the 6-man however, so this should be qualified. It has the space (when used by two) to lie in under extreme conditions for extended periods of time. The little "extra" makes the difference. (Barry Bishop & family (wife and children ages 4 and 2-1/2) spent 15 months living in this tent in Nepal last year (yes, 15 months). They are alive and sane.) Next time you go skiing for three weeks consider spending the \$300.00 you would spend on a room on a 4-man Ultimate, at the end of the trip you have "earned" the tent.

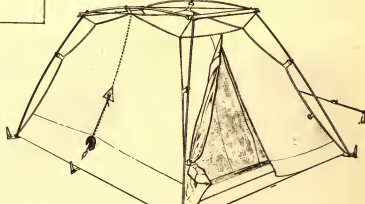
[Suggested and reviewed by Richard H. Goodwin]

from:  
Bishop's Ultimate Outdoor Equipment  
6804 Millwood Rd.  
Bethesda, Maryland 20034

2-man \$124  
4-man \$188



\$105 rip-stop nylon



## Poptent

The best roadside tent by far is the Thermos POPTENT® a dome shaped affair that erects in about one minute without ropes, poles, or stakes and will withstand bad weather remarkably well. Comes in two sizes with sewn in floor, screen door and window. Hexagonal floor about 6'6" feet across the flats sleeping two and a child, and a larger one about 8'6" feet and 6 feet high that will sleep four but with less wind stability. The smaller one is best, folding up into a bag 5 inches diameter and two feet long weighs 13 lbs. Prices vary from store to store, but expect to pay about \$65 for the small one, \$90 for the big one. Don't pay more. Cut urethane foam 2" thick to fit the floor, and you have a good camp for a small car or motorcycle.

[Suggested and Reviewed by J. Baldwin]

Poptent  
6% ft. green

\$70 postpaid (\$65 in the store)  
from:  
WHOLE EARTH CATALOG



## Barbour +

I have some information about Barbour Suits. I have owned their heavyweight International Suit Jacket for 3 years now. (It is mostly motorcycle stuff, from my knowledge.) It is as waterproof as rubber, but on a hot day only a bit less sweaty than rubber. Mine has been designed by Jack Stephenson, an aerodynamicist and mechanical engineer, who fabricates them as a part-time operation at home. The tapered hoop shape is very stable and doesn't flap in the wind. It also provides extra interior head room compared to conventional A-frame designs. Interior thermodynamics are designed to provide good ventilation and minimize heat loss. Length is over 10 feet, width of 5 feet. Fits in small size sleeping bag stuff sack. \$100-\$215.

## Eureka "Draw-Tite" Tents

Eureka has been making tents since 1895, and for any use other than backpacking, they are outstanding. I have owned their 2-man "alpine" for 3 years. I have lived in it for weeks at a time, in Minnesota blizzards and -40° temps., as well as howling 2 week gales on the Bering Sea Coast. It goes up fast (anywhere), is warm, dry, and reasonably priced. I have used the thermos "Pop Tent", and the draw-tite is a better tent in all respects. The recreational equip. co-op has the best prices on all draws.

from:  
Eureka Tent & Awning Co.  
Binghamton, New York  
or  
Recreational Equip.  
1525 11th Ave.  
Seattle, Wash., 98122  
553-133.95

Joe Bacon  
Amazonas, Columbia

## Tent from Virginia Ripoff

Several issues ago you carried a letter from me asking about advertising my quonset tent design. Since it was only an inquiry I didn't include any prices for the plans. When the letter appeared I began begging requests for the plans. I was interpreted by you finally able to get copies off to all who asked. With each copy sent an apology for the delay (8 weeks) and a bill for the plans (\$3.00) also my best wishes.

To date (3 months later) I have received a total of \$3.00. I am now only \$33.00 in the hole. Since your publication concerns itself to some extent with the quality of contemporary products, I thought you might like an indication of the quality of some of your contemporaries.

John Kary,  
S. Haven, Mich.



TEARS

As soon as Virgil was out of sight D.R. started crying. He couldn't help himself, the tears came pouring out, when David came up front and put his arm around him D.R. yielded. David was very cool. He didn't say a word. He just sat there with his arms around D.R. and let him weep into his shoulder as long as he had tears.



## Ocatd Sleeping Bag

The ideal poor man sleeping bag, now even cheaper than it was (replacing nylon exterior with taffeta, you can still get nylon if you want it). Since it's made of polyurethane foam you've little need for a pad or air mattress, and if you get rained on you stay warm—it's like a wet suit. The material breathes okay and by adjusting the hood and strings you can adjust to temperature. I've used a space blanket in combination with the bag for temperatures down toward zero. The heavy models of the bag are 1/3 thicker and a lot warmer. Ocatd is now coming out with a double bag. Rolling the Ocatd is difficult until you get the hang—squish the bag with your knees as you roll it.

—SB

Prices on 6'2" bags  
Single regular \$32 postpaid (\$30 in store)  
Single heavy \$39 postpaid (\$37 in store)  
Double regular \$42 postpaid (\$40 in store)  
Double heavy \$53 postpaid (\$50 in store)

Also obtainable in greater variety (nylon, 5'8" & 7'2", various colors) from:  
Ocatd Corporation  
Box 2308  
Santa Fe, NM 87501

or: Santa Fe Sleeping Bag Co.  
Suite  
1050 Old Picos Road  
Santa Fe, New Mexico 87501



## Sierra Designs

They are very, very nice people, and I truly believe they make the best available sleeping bags. Design, workmanship, materials, aesthetic beauty, all tops. Prices are high, but not that much higher than everyone else. If you're looking for the best, they've got it.

[Reviewed by Roland Jacopetti.  
Suggested by Sandra Tcherepnin.]

### Catalog free

from:  
Sierra Designs  
Fourth and Addison Streets  
Berkeley, California 94710



## double mummy

Double Mummy is a logical choice for maximum togetherness. It is lighter, cheaper and more efficient than most combinations of zippered-together single bags. Shell fabric is 1.9 oz. nylon ripstop. A 70" nylon zipper is located on each side of the bag and each zipper slides open from either top or bottom. It is also possible to zip only one of our other mummy bags to the double mummy. One size bag for persons up to 6'3" tall.  
STUFF SACK INCLUDED.

Loft: 6" ±  
Est. Min. Temp.: 10°  
Girth Shoulders: 100"  
Girth Hips: 98"  
Girth Feet: 82"  
\$140.00

Specifications:  
Construction: Slant  
wall, 6" tube width.  
Fill: 3 1/2 lbs. prime  
goose down.

Stuffed Size:  
11" x 21"  
Color: Blue.

## Yeti Sleeping Bags

I spent two months looking for a good down sleeping bag made by good downhome people at a good price. Well, that wasn't all I did for two months. Anyway, just after we threw the ching, a fellow walked in and said he made sleeping bags, showed me one, and I bought two. Here are the specs:  
made to order: send in your height and weight  
100% white goose down,  
ripostop nylon  
nylon net baffles  
nylon thread  
nylon zipper  
doublestitched at stress points  
choice of no zipper, half length zipper, full length zipper.  
from 1 to 3 pounds of down  
in any of the following (or combination of two colors):

blue, red, yellow, light or dark green, orange, aqua, black, white

you can get two that zip together, or one big single bag to fit two people (two times the single price), here is the price schedule for single bags:

zipper type	weight of down in pounds			
	1	2	2½	3
none	\$60	65	70	75
½ length	65	70	75	80
full length	70	75	80	85
				90

from:  
John Williams  
Yeti Enterprises  
P.O. Box 617  
Topanga, California 90290



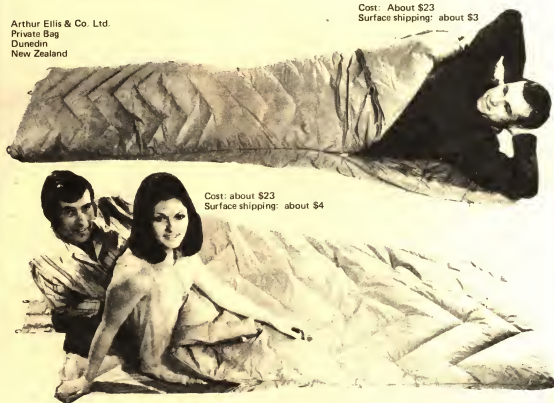
## Fairy Down Sleeping Bags

Here are the price list and catalog of some inexpensive and well made duck down sleeping bags. Mine cost under \$40 which includes all costs of shipping and insurance. It is their warmest bag. It has box-construction, chevron type down compartments, ripstop nylon covering and nylon zipper. It weighs 4 lb 2 oz including the detachable hood. It took somewhat over 2 months to get it by surface mail. By air it would arrive sooner but cost about \$10 more.

[Suggested and reviewed by K. Hagadone]

Arthur Ellis & Co. Ltd.  
Private Bag  
Dunedin  
New Zealand

The Twenty Below  
Cost: About \$23  
Surface shipping: about \$3



Cost: about \$23  
Surface shipping: about \$4

## Can Opener

The P-38 (or C) can opener, as surplus store owners tend to refer to it) may well be the highest point to which technology has ascended and is certainly an indication of the direction in which it should be headed—away from complexity, fairly gimmicky and unproven to simplicity and reliability.

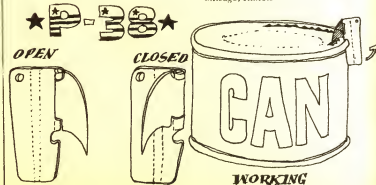
It weighs no more than a nickel, takes up less room than a key (I always carry mine on my keychain; you never know where your next can's going to turn up), has a break-down factor of 0, gets better with time (as all good things should), and, should you be unlucky enough to lose it, can be replaced for just \$9 (\$3.00) at the going rate.

Within my admittedly limited experience, it has also served as an effective, if frustrating, fishhook, a reasonable facsimile of a knife-point, a tack remover, and a superb toothpick (though my dentist would probably flip his fillings if he heard me say that).

Insert a dime, slip it on your keyring (or loachboard, depending where you're at) by means of the thoughtfully-provided hole (it was originally meant to go on a dog-tag chain), try to forget its millenarian ancestry, and never, never, never be without it.

Note on can-opening with the P-38: Do not open the entire lid, leave a piece attached, fold the lid back, bend it in half, and you have a backwoods coffee cup, soup bowl, water glass, etc.

Elot Wald  
Chicago SEED  
Chicago, Illinois



## Kelty Packs

Famous packs.

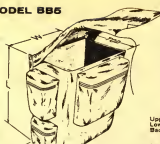
—SB

Catalog  
free:

from:  
Kelty Pack  
1801 Victory Boulevard  
Glendale, California 91202



MODEL 885



Designed primarily for expedition work, the MODEL 885 is a very large, heavy-duty pack. It is made with aluminum profile and equipped with five large side straps. Do not confuse the shoulder straps with the actual side straps. Model 885 available in three sizes only — see chart.

Colors: Olive Drab or Tan.

For Top 7 or other variations:

Upper pockets: 18" x 10" x 9" — L: upper  
Black pockets: 21" x 11" x 14" — L: upper  
Black pockets: 21" x 11" x 14" — L: upper

Price: \$29.75

11% for nation packing

### SPECIFICATIONS

MODEL	SIZE	WEIGHT	VOLUME	L	W	TOP	BTM
MEDIUM	23	3090	18	14	94	64	
LARGE	25	3680	20	15	104	74	
EXTRA LARGE	26	3890	22	15	104	74	

Height in inches include neck, head, shoulders, torso, arms and legs.  
Weight in pounds include contents of pack.  
Dimensions in inches include contents of pack.

coyote call  
on a dark site

down  
the  
canyon

holding  
the dark  
in  
the shape  
of trees

first  
one,  
then  
saw,  
then  
several  
coyote calls

Moe Armstrong

## JanSport Packs

this is the review we received of JanSport packs from  
Dennis Hollenberg.

A remarkable system because of its oval design and weldless construction allow the Jan Sport pack frame to flex when strained by weights and heavy loads, avoiding the sad broken-parallelogram demise of some ladder types.

Each frame section of tubular aluminum is swaged and fitted in an admirably craftsman-like manner and compressed to its mate by a tensional system of webbed nylon belts. The frame system is in dynamic equilibrium, continuously accommodating the load for more dependable balance; a special model is made for the high angle treks.

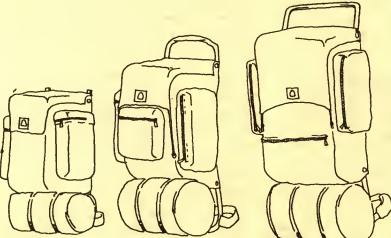
Hefty materials connect the cross pieces, enabling both easy height adjustment and disassembly to fit in a suitcase for that Himalayan assault. In fact, it has more provisions for adjustment than any other unit. Packing with a Jan Sport is like getting an extra pair of arms.

—DH

we sent for a pack, tried it a little, and decided it was a quality pack, so we got in touch with Murray Pletz, Mr. JanSport, and asked him to work up a series of good packs for us, here's what he came up with, it looks to be the best deal in packs we've seen, everything in forest green.

—jd

from:  
Jan Sport Company  
17010 Aurora North  
Seattle, Washington 98133  
or WHOLE EARTH CATALOG



**Earthchild pack:**  
\$20.00 postpaid  
(for kids and little people  
in general)

**Earthout pack:**  
\$45.00 postpaid  
(middle range all purpose  
packing and hitchhiking)

**Earthexplorer pack:**  
\$45.00 postpaid  
(Superpack for serious  
packing, putting your  
household on your back)

Rucksack

\$20 postpaid



## Adventure 16 Pack Kit

Something you might want to look at for the Nomads; Adventure 16 backpack and trail supplies 10066 Bert Acosta Drive, Santee, Calif 92071. Their strong point is their Kit-pack, which is what it says— bent aluminum tubing, fittings and rivets and all the nylon material, cords, zippers, grommets, etc. to make a pack. The pack is large, and there's enough material left over to make two extra pockets. In my opinion the belt arrangement is superior to Sierra Designs. There's a lot of work involved getting it together—especially if you don't know sewing-se. But what you have upon completion is a pack that is far better than those selling for \$50 and equal to those selling for \$65-75. Cost of kit: \$16.95 (with pattern), \$14.95 (without pattern).

Investigate!

[Reviewed by Tim Kelly]

## Haverhill's

Nifty items. High-rent personal furniture. Haverhill's carries sort of executive tools which because of their general lightness and handiness may be considered nomadic. The main drawback about Haverhill's is their customers, who brag a lot about the nifty little items. "See, You turn it around and it rubs your back. Then in here it has a cache for pills. I carry it with me all the time now. Why don't you get one? It's only forty-two dollars."

—SB

[Suggested by Alan Kalker]

Haverhill's Catalog  
free

from:  
Haverhill's  
584 Washington Street  
San Francisco, CA 94111



MAYBE VIRGIL LEAVES

After a while D.R. realized he was on the bed again, and that the box was moving. He didn't remember leaving the front seat, but what was more confusing, it seemed dark outside again. D.R. rolled to the edge of the mattress and looked up through the window at the sky. The clouds were there, but the sky was dark as midnight, there wasn't even a speck of moon to light them up. When D.R. looked toward the front of the bus to remark about the light, he saw Virgil sitting behind the wheel, and David in the other seat beside him. D.R. almost yelled then, but before he could the bus slowed down and stopped at the junction where the road to Blaine came into 666. D.R. listened as David offered to drive Virgil on in to Blaine. Virgil thanked him, but said he believed he'd rather walk. He only had three miles to go, but it was a long time till his appointment at the welfare office, and he was just as glad to have that far to walk to pass the time away. Virgil and David shook hands. When Virgil set out walking down the road toward Blaine, David shifted gears and headed down the final fifteen miles to Godsey's Grocery Store.



## Coleman Lanterns & Stoves

"Coleman lamps are terrible—they hiss clank and blind you, just like civilization."

Fact is: when the man says they blind you, what he's really saying is that they put out a lot of light. In most circles this is considered a plus. The big drag is that the bright light attracts everything that flies, every moth and his cousin for a radius of a mile comes to circle around your lantern. Simple remedy: buy yourself an amber glass (just \$1.99 at big S sport stores). Softens the light, doesn't attract bugs—at least not too many.

Come to think of it, I guess Coleman lanterns, stoves, etc. deserve a praiseworthy word from you folks. I've owned the same gasoline lantern for at least 15 years, and going strong. I'm about to replace the stove—with another Coleman, but that's not because I'm messy, and too lazy to clean it. It is interesting to note that other companies have marketed similar products in recent years, but have not at all improved upon the original design that Coleman has been selling. Also, Coleman sells replacement parts. You can buy a new generator pipe or valve, and get another 15 years of use out of a lantern or stove. This is unusual for an American co.

Bernard Altshuler  
Los Angeles, CA

## Outdoor Suppliers

An excellent list of practically all mail order outdoor suppliers (many more than we list) may be got from:

The Potomac Appalachian Trail Club  
1718 N. St. N.W.  
Washington, D.C. 20036



## Recreational Equipment, Inc.

"The Co-op" as it's called, probably offers the widest selection of camping and climbing gear available in the U.S. They carry many outstanding lines of gear, sometimes confusingly too many (their catalog shows 21 different ice axes!) I fully recommend the French Millet rucksacks (especially the ones with tough canvas sacks and leather bottoms) and their own line of Cruiser packs... both good values. Some of their "special imports" (from Japan) are cheap in quality besides price. For instance rubber water-proof coating peeled off screw gaters after 2-3 uses but they took them back for full credit two years later.

Membership is \$1 and you get approximately a 10% dividend each year.

[Reviewed by Drew Langner,  
Suggested by Roland Jacopetti.]

### Catalog and Membership \$1.00

from:  
Recreational Equipment, Inc.  
1525 11th Avenue  
Seattle, Wash. 98122



[A] Sierra Cup. Stainless steel, all-time favorite, wire handle, nesting.  
H657C37 Weight, 3 oz. ....1.00

[D] Instant Tent 1-Man. A polyethylene tube 9' long, 3.2' in diameter (9" flat) with 3 grommets at each end for drawing the ends together. The polyethylene is .003" thick. Green.  
E477A34 Weight, 1 1/4 lbs. ....2.39

Instant Tent 2-Man. A 4.8' diam. x 9' long polyethylene tube .003" thick. Color: Green.  
E477A35 Weight, 2 1/2 lbs. ....4.50

[A] Austrian Rock Hammer. With a sharp pointed head. Length 10", 4 1/2" head. Ash handle with leather thong for carrying.  
A018E1 Weight, 1 lb. ....2.95

## L.L. Bean

The Bean catalog is the model for the WHOLE EARTH CATALOG. Mr. Bean had a directness and integrity that shows through in his catalog, his products, his service. The catalog has excellent items, especially outdoor clothing. An uncommonly pleasant company to do business with.

—SB

### Catalog free

from:  
L. L. Bean, Inc.  
Freeport, Me. 04032

## Bicycle Panniers and Touring Bag

Lightweight compartmented panniers similar in design to the time proven packs used in horseback travel. Zippered compartments allow easy access and packing of load for controlled weight distribution. Made from waterproofed nylon.

Color, Blue. Size 18" each side x 15" x 9". Weight 1 lb. 14 oz.  
Price, Panniers, \$30.00 postpaid.

**Bike Touring Bag.** Fits on handlebar or behind saddle. Made from waterproofed nylon, zipper closed. Large enough for lunches, extra jacket, sweater, etc.  
Color, Blue. Size 6" x 9" x 10". Weight 11 oz.  
Price, Touring Bag, \$15.00 postpaid.

## Bean's Mountain Pants

Sturdy, two-ply twill fabric of polyester and combed cotton. Exceptionally strong and abrasion resistant with a supple finish for wearing comfort. Washable.

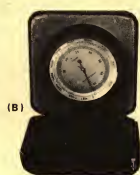
Two convenient bellows pockets in front measure 6 1/2" x 8 1/2". Ample for tackle, maps, tools, etc. Plus two hip pockets with button flaps. Double seat and knees for extra protection. Adjustable Velcro straps on lower legs for keeping out insects or wearing inside boots.  
Color, Taupe.

Men's even waist sizes 32 to 44.  
Inseams 28", 30" and 32".  
Price, \$19.75 postpaid.



[C] Velcro® Closures. The pull-apart closure that takes the place of a zipper. Although sold separately, both halves are needed for a closure. Grey color.

N315B14 1" hook, per foot .....35  
N315B15 1" pile, per foot .....35  
N315B16 2" hook, per foot .....70  
N315B17 2" pile, per foot .....70



[B] French Altimeters. Watch-type instruments in plastic case, compensated for temperature, movable outside altitude scale for adjusting. With carrying case, size overall 3 1/4" x 3 1/4".

Calibrated to 16,000', 100' graduations.  
P069A10 Weight, 4 oz. ....20.95  
Calibrated to 21,000', 200' graduations.  
P069A11 Weight, 4 oz. ....24.95

## FILM

No dividends are paid on the films and print services listed below. When ordering, use the Kodak order number for film.

### Color Film

K135-20 20 Exposure (list \$2.10) .....1.68  
K135-36 36 Exposure (list \$2.95) .....2.35  
KX135-20 20 Exposure (list \$2.10) .....1.68  
KX135-36 36 Exposure (list \$2.95) .....2.35  
KX126-20 20 Exposure (list \$2.10) .....1.68  
K459 25' Roll 8 mm (list \$2.95) .....2.55  
K4A64 Super 8 (list \$3.20) .....2.65  
K447 50' Magazine 16mm (list \$7.05) .....5.83  
K449 100' Roll 16mm (list \$8.05) .....7.55

## FENWICK VOYAGEUR RODS

[A] Ferallite Rods. Consist of four or five tubular glass sections which approximate one-piece action when assembled due to the fiberglass slip joints which eliminate the need for metal ferrule joints. Rods have full cut cork grips, anodized aluminum reel sets, are resin finished and packed in aluminum cases with screw caps. Fly rod case is 26 1/2" long. Spin-Fly rod case is 24 1/2" long.  
S662B1 7 1/2' Fly Rod, 14 1/2 oz. ....31.95  
S662B4 8 1/2' Fly Rod, 17 oz. ....36.95  
S662B2 7' Spin-Fly Rod, 14 1/2 oz. ....32.95  
S662B5 7 1/2' Spin-Fly Rod, 18 1/2 oz. ....36.95  
S662B6 7' Spin Rod, 18 oz. ....31.95  
S662B7 7' Steelhead Rod, 1 1/4 lbs. ....35.95



[H] Justirite Carbide Lamp. With a 4" reflector, 4 1/2" high, brass, weight 7 1/2 oz.  
L519C31 .....5.50  
L519C32 Carbide, 2-lb. tin .....7.35



## SILVA COMPASSES

Swedish made, graduated 0° to 360°, transparent base plate and housing. All plates are ruled in inches and mm, except the Huntsman model which is in inches only. Jewel bearings. Instructions are included.

[A] Explorer. Liquid filled, luminous points, with aluminum housing, used by Scout leaders. Cord for carrying included.  
P633B1 Weight, 3 oz. ....8.95

[E] Ranger. Liquid filled, sighting mirror, with declination offsetting device, luminous points, used by professional people.  
P633B5 Weight, 3 oz. ....14.95

## The Smilie Company

For those interested in traditional mule packing and log cabin living—or if you're just hung up on old time type stuff. Everything from sheepherders' ovens to genuine heavy iron griddles. They also make those large semi-permanent encampment tents.

[Reviewed by Drew Langner,  
Suggested by Jim Wayman]

### Catalog \$1.10

from:  
Smilie Co.  
576 Howard Street  
San Francisco, Ca. 94105



2-3405 SHEEPHERDERS WOOD CAMP STOVE is the old time sheepherder's stove, built for hard and long use. Of heavy sheet iron (20 ga.) with 5 piece telescoping pipe (16" lengths) which packs in fire box. Oven size 9" x 8" x 11" with bakpan. Overall size 12" x 9" x 27". Can be packed as top load on pack animal. Wt. 26 lbs.  
Shipping weight 35 lbs. ....\$2.00

2-3428 4" Stove Pipe Damper Wt. 7 oz. ....\$ .85  
2-3429 5" Stove Pipe Damper Wt. 9 oz. ....\$ .95  
2-3425 4 1/2" Stove Pipe Tent Ring Asbestos. Wt. 4 oz. ....\$2.25  
2-3427 5 1/2" Stove Pipe Tent Ring Asbestos. Wt. 5 oz. ....\$2.50  
2-3425 6 1/2" Stove Pipe Tent Ring Asbestos. Wt. 6 oz. ....\$2.75  
2-3410 Extra set Telescoping Pipe for Sheepherder Stove - 5 pieces - Maximum diameter 5". Wt. 6 lb. ....\$6.65

PONCHO/SHELTERS are made from completely waterproof ultra lightweight coated nylon material with a snap-up hook. Snaps are provided along each side spaced approximately 2"-3" apart so that each side can be snapped closed together with any other size, and without side leakage as is common with ordinary ponchos. Also these snaps allow pairs of these ponchos to be snapped together with any other size, and these can be setup either as an inverted V-shaped tent or a lean-to shelter. Grommets are provided at the four corners and at the mid-points of the sides. Wear your shelter during the day as a poncho and use your poncho as a shelter at night.  
6-5428 PONCHO/SHELTER, Large. Size 106" x 63", for persons over 5' 8" tall. Wt. 1 1/4 lbs. ....\$17.50  
6-5429 PONCHO/SHELTER, Long-Tailed Medium for over-the-pack. Size 106" x 52". Wt. 1 lb. ....\$16.50

## Ski Hut

A well-established supplier of outdoor goodies. Colin Fletcher, the complete walker, gets most of his stuff there. I see they're giving even dollar prices now. Good for them.

—SB

## Catalog

### free

from:  
The Ski Hut  
1616 University Ave.  
Berkeley, CA 94703

**EVEREST — THE WEST RIDGE.** Tom Hornbein. A moving account of the 1953 American Everest Party's first ascent of the West Ridge; from its inception, through the rain forest of Nepal, to its triumphant climb on the starkly beautiful summit ridge. 90 color plates. . . . \$25.00  
Abridged paperback edition \$ 3.95



**SAFARI ONE-MAN COOKSET.** Spun aluminum from West Germany. Includes 8" plate, 7" fry pan, 6 1/2" dia. pot with lid, spoon-fork combination, spring pot gripper, and plastic cup. Packs into neat unit 2 1/4" x 8" diameter. Exceptionally lightweight and an excellent value.  
U301 . . . . . wt. 17 oz. . . . . \$ 3.75

## Holubar

We've been slow to list Holubar because we're not familiar with their stuff. Readers who have used their stuff have been fast to advise us that we list them and prominently. Done.

—SB

(Suggested by Craig Schensted)

## Catalog

### free

from:  
Holubar Mountaineering Ltd.  
Box 7  
Boulder, Colo. 80302

## MALLORY FLASHLIGHT

Two sizes now available! The handiest lightweight, non-corrosive, compact flashlights for around camp and can be easily stored in pocket, pack or glove compartment.



**MALLORY AA MODEL** (2 AA cells included). Wt. 3 oz. . . . . \$1.95  
AA Cells. Wt. 3/4 oz. . . . . 2 for \$1.20  
**MALLORY C MODEL** (2 CC cells included). Wt. 7 1/2 oz. . . . . \$2.79  
C Cells. Wt. 2 1/2 oz. . . . . 2 for \$1.60



## "EZEZ" BACKPACKERS TROWEL

Made from CYCOLAC plastic, this tough, lightweight tool has many uses around camp. Trowel is marked with 5" scale.

Wt. 2 oz. . . . . \$0.39



## HOLUBAR

### "COLORADO DOWN PANTS"

A lightweight pant that is very warm for wear in extreme cold. Quilted construction with tough 11-A ripstop nylon fabric and 10 oz. of AA PRIME NORTH-EAST GOOSE DOWN (Garment Grade) filling. Waistband is elastic with drawstring ankle closures. Snaps along the inseams, insulated with Down-filled tubes and snaps on the overlapped fly allow pants to be put on over boots and crampons; also allows pants to be converted into a light short half bag. A perfect combination with the "COLORADO DOWN PARKA." Stuff sack included.

Colors: Blue or Orange 11-A; Navy NP-64  
Sizes: S:late waist and inseam; Regular Inseam (28"-31"); Long Inseam (32"-35")  
11-A, Wt. 1 lb. . . . . \$40.00  
NP-64, Wt. 2 lb. . . . . \$45.00



**MUIR TRAIL.** An excellent lightweight trail boot of gray abrasion-resistant suede. Fully lined in smooth calf; padded tongue and ankle section. Reinforced toe caps and heel counters. Non-skid Vibram lug soles. Doubles as an excellent climbing boot. Height 8 1/2". Sizes 4 to 14; widths AAA to D.  
B101 . . . . . ave. wt. 3 lbs. . . . . \$ 26.50



**RUSSELL BELT KNIFE.** This unusual knife has received many design awards for beauty and function. Handcrafted in Nova Scotia. Blade is of high carbon Swedish steel. Unequaled for holding a keen cutting edge. Rosewood handle is secured by three brass rivets. Molded cowhide scabbard. 4" blade.  
J150 . . . . . wt. 6 oz. . . . . \$ 16.00



**SPACE SPORTSMAN'S BLANKET.** This amazing full-size (56" x 84") blanket reflects up to 80% of the body's warmth, yet folds to only 5 1/2" x 8" and weighs a mere 11 ounces. Tough enough to take on the 1987 winter ascent of Mt. McKinley, the Sportsman's blanket has also proven itself in the jungles of Ecuador. Waterproof and windproof, it will never crack, rot, or mildew, and remains flexible at 50 degrees below zero. Pound for pound it is ten times warmer than wool; and with bound edges and grommeted corners, this versatile blanket may be used as a ground sheet, wind break, stadium or boat blanket—even a radar reflector. Colors: red, blue, or olive with silver.  
E701 . . . . . wt. 11 oz. . . . . \$ 8.00



**PLASTIC WIDE-MOUTH BOTTLES.** Unbreakable polyethylene. Positive sealing heavy-duty lid.  
U650 3 qt. . . . . wt. 1 1/2 oz. . . . . \$ .45  
U651 1 qt. . . . . wt. 2/3 oz. . . . . .70  
U652 1 qt. . . . . wt. 5/8 oz. . . . . 1.10



HARDLY

By the time they got to the little community of Hardy, three miles down the road from Godsey's store, it was light enough outside to see the barns and houses they drove by. As far as David could tell, Hardy hadn't changed a bit since he used to come there on Saturdays to the stock sale as a child. Mooney's store and filling station were on the left exactly as they had always been, and beside them Harold Campbell's Feed and Grain. On the right were the rows of stock pens, and the old run-down house at the end where missionary ladies used to sell second-hand clothes. Across the road from the second-hand store was Mable's Place, and beside it, set back from the road a ways, was the old flat-roofed, red brick-sided Pentecostal Church of God. The place was so still that hour of day it looked more like a movie set of Hardy than actually Hardy itself. David wanted to stop the bus and get out and walk around.

He asked D.R. if that would be all right. D.R. was sitting in the front, "Come on," said David. "Just for the half of it. There's nobody out there."

But D.R. didn't want to, and David didn't want to push. He drove on, and a few minutes later pulled up in front of Mrs. Godsey's store at the mouth of Trace Fork.



## Herter's

If we gave a prize for most-suggested item, we would have to award it to Herter's, the people's choice (maybe 30 suggestions, 15 or so reviews). Everybody says their prices really are low and their quality good on a truly unusual range of products. And Herter's indeed puts out the most entertaining catalog in the business (\$1.00 until you're a regular customer; \$56 pp.). At mail order distance it's a giggle, all those inflated boasts and fierce gun and trap write-ups and between-the-lines patriotism. We visited their showroom in Minnesota a summer ago, and in the presence of their guards and threatening signs and shoddy goods on display—well, up close we stopped laughing. [By the way, I could see people doing very similar takes on the **WHOLE EARTH CATALOG**—we pretend to be a consumer service, but it's just a front for fuzzy-headed apologism for dope and sex and subversive activity. No wonder I'm freaky about Herter's. We're sisters under the skin.]

—SB

Herter's Catalog  
1970; 656 pp.

\$1.00 postpaid

From:  
Herter's, Inc.  
Waseca, Minnesota 56093



## Hurter's

I realize there are many good things about Herter's. Yet I feel there are much more important things about that should be brought to your attention. In 1970, Herter's was fined . . . \$15,000 for killing or paying poachers for killing an almost extinct Indian bird, illegally importing them, so they could use their feathers for fishing lures. . . .

I would also like to bring to your attention that Herter's sees wildlife as a product to be consumed, not honored. This is repeatedly brought up in their own catalog, those guns and traps you talked about.

Thirdly, Herter's exploits the people who work for him by the fact that he underpays the workers, and has little if any interest in them. He doesn't even insure his help while they work for him. It seems ironic that he should produce a book on how to get out of the rat race, when he himself is making a very good living off it. Again, I would like to tell you that I really think you have a good thing, but please make it a little better. . . . please!

A local Wascian

P.S. I may be a farmer & can't spell well, but I also love the animals and plants that share my farm.

Thank you.

## Camp and Trail

The most beloved of the New York outdoor suppliers.

—SB

[Suggested by Annie Helmuth]

Catalog  
free

From:  
Camp and Trail Outfitters  
112 Chambers Street  
New York, N. Y. 10007

No. 178—RUBBER WASH BASIN  
16" Diameter, 5" deep. 2 gallons capacity  
WEIGHT: 1 1/4 LBS. \$8.50



## POP-TENT CAMPER

7 foot diameter, sleeps two adults. Finished size 52" high, 81" wall to wall. Folds into 30" carrying case. 13 lbs. Gray, 8.16 High count DVI, mildew and water resistant. \$61.95

No. 159—Lennan Rubber Light  
A 2 cell waterproof, damage proof flashlight. Has a very excellent switch. Wt. empty 8 oz. \$2.95



268 Outdoor Suppliers  
Nomads

## HERTER'S COTTONTAIL RABBIT FLUSHER

FLUSH COTTONTAILS FROM ANY TYPE OF COVER



The main problem in cottontail hunting is to get them out where you can get a shot at them. Unless you have a good rabbit dog or there is fresh snow on the ground, you walk right past cottontails in brush and grass without getting them up.

Our call is loud and piercing and will get them up in about a 20 yard circle. Just right for good shooting. Takes only minutes to learn how to blow it.

Shpg. wt. each 8 oz.; per doz. 6 lbs

No.	1-4	5-11	1-5	4 Doz.
	Calls	Calls	Doz. Calls	or more
	Each	Each	Per Doz.	Per Doz.
C39	\$2.00	\$1.40	\$18.00	\$14.40

## HERTER'S GENUINE HUDSON BAY WILDERNESS ICE CHEST

THE ONLY ICE CHEST ENDORSED BY THE INTERNATIONAL GUIDE ASSOCIATION

You will see it in Africa as well as in Asia and in Canada, and it went up Mount Everest. This is the only ice chest endorsed by the International Guide Association. This ice chest is made for the serious outdoorsman who must have a chest that will stand up under the hardest use and one that honestly will keep food fresh for weeks, not just days.

The outside of this chest is made of durable duralumin. The insulation is genuine epofom a full inch thick. It gives over four times the insulation of fiberglas. The cover is also insulated with a full inch of epofom. This cover has over six times the insulation of any ice chest. Handles are not cheap metal stampings but solid cast duralumin handles that lock the cover tightly in place with a ball bearing roller. These handles are the only genuine heavy duty handles on any ice chest. They are made so they cannot cut your hands as you lift the chest. You can

## Eastern Mountain Sports

Big glossy East Coast supplier.

—SB

Catalog  
free

From:  
Eastern Mountain Sports Inc.  
1041 Commonwealth Ave.  
Boston, Mass. 02215



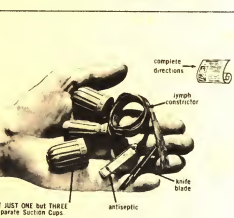
## Venson getting

I read that book by Francis E. Sell that **DEER HUNTER'S GUIDE** & it's pretty good if you're one of those sporty guys he says he killed a thousand deer 1000 that's a lot of meat for a man & his family & his friends to eat  
at Libre we killed 8 deer last year & we fed a lot of friends  
& we thought we had plenty of meat  
at that rate it'd take us well over 100 years to kill 1000 deer  
I guess we just ain't sporty enuf  
It takes Francis Sell about 200 pages to tell you the same things  
that Herter's tell you in that free 20 page pamphlet you get with knives & deer calls  
except the Herter's pictures are better  
I don't know anything about sporty hunting  
I'm a good poacher  
I've thought a lot about it & decided that if there's going to be meat on my table  
I'm going to put it there  
I hunt with a .22 Winchester magnum with a 4x scope  
I have a blind overlooking a big block of salt in a creek bottom  
the deer come there every morning & evening  
I watch them  
I call them with a Herter's Deer Call  
I ask them if any among them is ready to die  
I tell them that we will use the energy we get from eating their flesh in a way that would please them  
I don't forget those words  
almost always it is a doe without a fawn or a lone buck that tells me he will join us  
I shoot them in the chest from no further than 50 yards  
they die almost instantly  
I feel their spirit enters me  
everytime  
it feels good  
that's all I know about killing deer.  
Joy—Love—All Blessings  
Peter Rabbit  
Libre, Colo.

## HERTER'S COMMERCIAL FRUIT AND NUT PICKERS

Pays for itself in one season  
Made of heavy lifetime galvanized wire, expanded to a pole or long stick. Picks apples, pears, peaches, apricots, plums, walnuts, butternuts, pecans, etc. Pays for itself for the home owner with fruit or nut trees or for persons who gather wild nuts for the market. A great gift too.

AM62 Shpg. wt. 8 lbs. \$1.00



## CUTTER SNAKE BITE KIT

Simple and effective, this kit is one of the lightest, most widely used emergency kits for snake bite.

C021-205 \$3.00

## BUCK KNIVES

World renowned; high carbon steel, beautifully tempered. Very tough but not brittle, will hold edge even after cutting bone. These blades are still handcrafted. All large Buck knives come with handsome full leather sheath with belt loop, including the folding "Hunter." The three small pocket models come with no sheaths.

Buck General	7 1/2" blade	Model #120	\$22.00
Buck Special	6" blade	Model #119	20.00
Fisherman	5 3/4" blade	Model #121	14.00
Pathfinder	5" blade	Model #105	16.00
Personal	4 1/2" blade	Model #118	14.00
Skinner	4" blade	Model #103	18.00
Woodman	4" blade	Model #102	13.00
Caper	3 3/4" blade	Model #116	14.00
Buck Folding Hunter	4" blade	Model #110	16.00

(arranged as in picture)

## Don Gleason's Camping Equipment

A big range of stuff, uneven prices. Some unique funky items. More stuff for car camping. Good prices. Also check surplus catalogs (p. 141).

### Catalog

\$0.25

from: Don Gleason's Campers Supply  
9 Pearl St.  
Northampton, Mass. 01060

Stop worrying about bad weather. No need to let a cold, damp sleeping bag ruin your fun. No more handling and drying heavy canvas.

VersaTarp gives you the rugged long life and dependability of canvas with the light weight and convenience of plastic.

Handy VersaTies let you rig your VersaTarp into dozens of protective covers and shelters. And they have greater pull out strength than conventional grommets.

SIZE	WEIGHT	VERSATIES	PRICE
8' x 6'	1 1/2#	12	4.50
8' x 12'	2 3/4#	12	7.50
8' x 16'	3 3/4#	24	10.50
12' x 12'	4#	24	11.95

### Black's

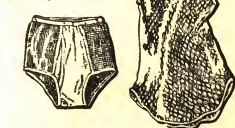
Said to be the largest camping equipment supplier in England, Black's has an outlet in New York state.

[Suggested by Jerome Skala] —SB

### Catalog

free

from: Thomas Black & Sons  
930 Ford Street  
Ogdenburg, N. Y. 13669



#### SPECIALIZED STRING UNDERWEAR

Very popular underwear which keeps the body at normal temperature in both hot and cold temperatures by providing an insulating layer of air next to the skin. Very comfortable and light. Made in Norway. Athletic Shirts, Weight 4 oz. \$2.95  
T-shirt, Weight 5 oz. \$3.45  
Shorts, Weight 4 oz. \$2.95  
Longs, Weight 5 oz. \$4.95

### Eddie Bauer

Dude catalog. Very expensive maybe very good dudes. The hides of too many endangered species involved. Their down stuff has good reputation.

—SB

### Catalog

free

from: Eddie Bauer  
Box 3700  
Seattle, Washington 98124

#### SWISS ARMY KNIVES

Made in Switzerland from tough, rust-proof, corrosion-proof Stainless Steel. Each knife has blades, screwdrivers, punch, can and bottle openers and exotic tools in sizes and assortments that fairly boggle the mind. Traditional Red handles with Swiss Army medallion and swirled lanyard.

5870 — 2 blades, screwdriver and can lifter, can opener and punch.

5871 — 2 blades, screwdriver and can lifter, can opener and screwdriver, scissors, punch, Phillips screwdriver and can lifter.

5872 — 2 blades, screwdriver and can lifter, can opener and screwdriver, scissors, punch, Phillips screwdriver and can lifter.

5873 — 2 blades, screwdriver and can lifter, can opener and screwdriver, scissors, punch, Phillips screwdriver and can lifter.

5874 — 2 blades, screwdriver and can lifter, can opener and screwdriver, scissors, punch, Phillips screwdriver and can lifter.

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5894 — 2 blades, screwdriver and can lifter, can opener and screwdriver, scissors, punch, Phillips screwdriver and can lifter.

#### JUNIOR CAMPER Sleeping Bag

Built to Bauer Quality Standards and sized to serve most youngsters until they're into their teens. Measures 55-inches long; 7 1/2-inches from end to end with the hood unrolled. With Nylon zipper closed, with a top is 25-inches. Fully insulated with Bauer Goose Down quilted in Glacier Blue Rip-Stop Nylon outside and Gold inside. Comfort Range is 25° to 65°. 3-way convertible hood forms a pillow in mild weather, or a side clipped up when it's windy, or fully closed with drawstrings snugged for maximum protection for head and shoulders.

This fine sleeping bag is amazingly light in weight... less than 25-ounces... and its own tote bag makes the JUNIOR CAMPER compress to a size that fits conveniently in a youngster's pack or rucksack.

6041 JUNIOR CAMPER and Tote Bag

ppd. \$29.95 0\*

ppd. \$29.95 0\*

ppd. \$29.95 0\*

#### TRUE TEMPER CAMPERS KITS



A compact three-piece set consisting of a set, utility saw and shovel. Designed especially for campers, trailer owners and vacationers. Shovel is heat treated, smooth finish blade, strong fire-hardened ash handle. Axe is famous "Kelly" quality durable heat treated head. Saw is a chrome plated tubular steel frame with carbon fiber shaft and strong, easy to use, long-life blade stays sharp for fast, easy cutting. Materials: 17" shovel, 18" axe and saw.

Set No. 10" Shovel w/axe handle axe and saw. \$19.50  
Set No. 10" Shovel w/axe handle axe and saw. \$19.50  
Set No. 10" Shovel w/axe handle axe and saw. \$19.50

#### COLLAPSIBLE PLASTIC WATER TOTE



Now a water cooler designed especially for the sportsman and vacationist — made of a super-tough for rugged outdoor use polyethylene — approved use for drinking water. Lightweight and completely collapsible when empty. Easy dispensing of liquid through a white neoprene tube. Strong handle for carrying. Picture shows 5 gal. model collapsed and 2 1/2 gal. picture shown in Canada.

Cap. Size. 5 1/2 Gal. 14.95  
5 Gal. 12.95  
5 Gal. 12.95

It's a blanket that is ten times warmer, pound for pound, than wool. Waterproof, windproof, self-sealing at 60 degrees below zero, the SPACE Sportman's Blanket is the most versatile blanket ever made. Moreover, it is a full size 56" x 84" blanket that folds up to a compact 8 1/2" x 12 1/2" package, weighs only 11 ounces... Comes with its own handy reusable plastic pouch. It won't crack, mildew or rot. It is extremely pliable and impervious to moisture. What's more, it is a radar reflector that's always ready to use... wipes clean with a damp cloth. Sh. Wt. 1 1/2 lbs.

Cat. No. 98-09 \$13.95

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#### (Not exactly as illustrated)

#### MT. CLIMBER CANDLE

#### LANTERN No. 30

Very much like the old favorite made years ago. Made in Europe. Telescopes out 11" when used and is but 4 1/2" long when closed and slightly over 2" in diameter. Handy arrangement for installing candle-wind proof glass protected windshield. Candle sold separately. \$4.50  
Wt. (less candle) 4 oz.

Ship. Wt. 14 oz.

Cat. No. 80-25 3 for 25¢

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## The New Cross-Country Ski Book

I'm really liked, your January, 1971, issue mentioned cross-country skis as being "awkward" (article on snowshoes). *Falst*. Ski touring is the best, quickest, most healthy, and most beautiful way to travel across the snow. And right now, before the big industries exploit the market, good equipment is still very cheap. A pair of out-of-date army-surplus touring skis run from \$50.00 to \$5.00 in your local Army-Navy.

I don't know if it snows in California, but in New England half the year involves snow. Why not mention cross-country skiing, not just as a fun sport, but as the smartest way to get about during the winter months? It's a way of life in Scandinavia. Speaking of snowshoes, give touring a try. It's better than acid. And it's ecological.

The best, and still cheapest, handbook is Johnny Caldwell's *Lots of pictures, and the words of an expert—the US Men's Cross-Country Ski Coach, and a devout Vermont farmer in his spare time (during the Tearing Season, anyway). All you need to know to get going and to love what you are doing. I don't care what you say, but MENTION CROSS-COUNTRY SKIING. Not all your readers are summer people!!!!!!*

(Reviewed by Jim Townsend)

## The New Cross-Country Ski Book

John Caldwell  
1984, 1968-92 pp.

\$3.95 postpaid

from: Stephen GreenPress  
P.O. Box 1000  
Bartlettville, MO 05301

or WHOLE EARTH CATALOG

If you're already skiing x-c and are perfectly happy with your technique, OK, don't be dumbed by this chapter. I've seen a lot of happy golfers or tennis players go sour after trying to "improve their game." Enjoyment by the participant is the most important aspect to my way of thinking. So for you at this stage, why not approach method as a means of increasing your pleasure, and not as an end in itself?

## Akers Ski Equipment

Unfortunately there are still not many stores that sell cross-country equipment and those that do overprice equipment and don't have a very good selection.

Akers has a good variety of boots, skis, poles, wares, etc., at reasonable prices. They are also amazingly prompt in filling mail orders. A pair of skis we ordered arrived within the week.

(Suggested reviewed by Jake and Andy Cook)

Akers Ski Equipment  
Andover, Maine 04216



**321 TOURING BINDING.** Adjustable cable attaches to side of toe plate. Sizes S, M, L. \$6.95 Ppd.

## Snowmobiles

Snowmobiles have waked the frozen north out of its hibernation. Some eskimoes have traded in their dog-sleds on snowmobiles and fashioned fuel filters out of driftwood when necessary to keep them going. Among off-road vehicles snowmobiles cause the least ecological damage provided you don't go bathing the bush tops. The worst damage they do is bringing clutter and haste to still winter woods. Manufacturers are principally irresponsible for not quieting their engines. As soon as a quiet one is built, buy it and boycott the others.

Ski-doo is the most economical-dependable-popular of the 50 or so snowmobile makes. They have a dual track that looks good for winter hauling.

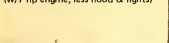
We're listing Sno-Scat here because it's the only snowmobile kit we've seen. Don't know about its performance. The manufacturer also has kits for little tractors (including caterpillar) and all-terrain vehicles.

## Catalog

\$0.75

from: C.F. Struck Corp.  
Ocedburg, Wisconsin 53012

Sno-Scat Kit  
(w/7 hp engine, less hood & lights)



**270** Snow Equipment  
Nomadics

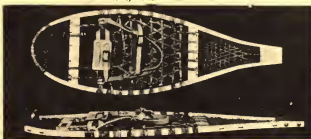


No. 19. The x-c way to climb a hill: ski up the thing.

## Snowshoes

Winter in the woods. Snowmobiles too noisy, ugly and may be fuck up the ecology. Cross country ski dandy but too awkward for working (Cutting trees, working in brush, etc.) Best snowshoes I've ever seen are Walter York shoes. Better made than Canadian shoes which are the most often sold. York starts by cutting and drying his own ash. Streams and bends the ash. Makes his own rawhide and his own harnesses. The shoes are fucking beautiful. Light and very strong. Good tools. He'll even sell you shoes with turned-up toes (Alaska type) but you'll have to persuade him because turned-up toes slide you backwards down hills. He also reluctantly admits that neoprene is maybe better than rawhide for webbing because wet snow don't stick to neoprene. He sells boots. Prices about comparable to usual prices. Abt. \$30 plus \$4 for the binding. He custom makes shoes to order and specific needs. Heavy people need bigger shoes. Some people want a quick-release harness etc. He says his feet shoot too fast he hates to work on Canadian ones. After using his shoes, I can't blame him.

Good luck to the Catalog & Godspeed,  
Snee & Anne Ashley  
N.Y., N.Y.



## MODIFIED BEAR PAW, RAISED TOE

13 x 36 in. \$26.00

Neoprene fitted. \$26.00

Rawhide. \$28.00

Carstunk Snowshoes  
Walter E. York, Mfr.  
Carstunk, Maine 04925

## The Off-Road Vehicle and Environmental Policy

Primarily about snowmobiles. They've misused the woods, so they're going to be regulated.

\$1.00 postpaid

from: The Conservation Foundation  
7117 Massachusetts Ave. NW  
Washington, D.C. 20038

## Dog Sleds

I grew up listening to Sgt. Preston of the Yukon on the radio. They had the finest sled-dog yelps and whistling wins you can imagine. Don't imagine. Get some. Nordyck Thompson has sled dog equipment. Raymond Thompson has two books on sled dog training. Oh, King. Oh, you huskies.

(Suggested by Glen Rawson)

## Catalog

free

from: Nordyck Outfitters  
Mazuma, Washington 98833



**Team And Trail**  
the musher's monthly news  
CENTER (BARBOR, N.Y. 04226)  
Telephone 603/254-2465

STANDING OFFER!  
If you are not a Team & Trail subscriber, send your address for sample copy.  
TAT is for the novice AND professional musher!

## Complete Cross-Country Skiing and Ski Touring

Where Caldwell meets at the subject from the perspective of the expert, Lederer and Wilson work from the beginner's view. It's a straight well-made how-to book. Either book will do it for you.

—\$8

## Complete Cross-Country Skiing and Ski Touring

William J. Lederer, Joe Peter Wilson

1970, 184 pp.

\$5.95 postpaid

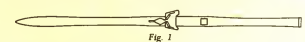
from: W. Norton & Company, Inc.  
55 5th Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

Complete information on ski touring, trails, clinics, and clubs can be obtained by sending \$2.00 to Rudolph F. Mettsch, Ski Touring Council, Inc., West Hill Road, Troy, Vermont, 05868. We recommend this for all ski tourers.

The air should be emptied from the lungs with a great, big, powerful whoooooosh, thus emptying the lungs of the carbon dioxide which has accumulated from the strenuous physical exercise. The skier should not even be thinking about breathing in. If the air is forced out of the lungs, the lungs will draw the breath in quite naturally on their own and in a very comfortable and invigorating manner.

If the skier can acquire the habit of emptying his lungs in this manner thus getting rid of the excess carbon dioxide, the way his stamina in skiing will increase will be almost miraculous.



## Beck Neoprene Bindings

Leather bindings for snowshoes and crampons stretch and freeze up. Beck's neoprene bindings don't.

—\$8

Bruce Beck  
Box 3051  
S. Berkeley, Calif. 94703



REGULAR MODEL makes use of the design used widely over this continent by trappers, lumberjacks, and real outdoorsmen—men who sometimes must be on snowshoes 25 hours a day. We have replaced their leather strap with neoprene-nylon, which lasts longer and doesn't stretch. We have added riveted tabs for adjustability in the arch area, and special length adjusters where heel straps attach to snowshoe cranks. Three buckles per shoe (heel strap buckle shown in photo No. 2). All ends pointed, all holes punched clean. Standard size shown, the first item on page 1 first. 7.00 ppd.

When the dog is traveling well, he may still stop when the drag strikes an obstacle or catches on something. This is where he learns to pull. If you think he can break it loose with no assistance, use your "impatient" voice, "Rover, Okay, Okay" for whatever forward command you use. Step forward so that there is slack in the long lead, and if the dog does not try to break loose the lead, flip it in a quick throwing motion— but not letting go of the end— so that the loose line slips against his rear. If he makes any sort of attempt to pull, the drag will usually come loose and move again, and you have accomplished your first major feat: getting the dog to pull something he thought he couldn't pull, on your command. Tell him he is a good dog; keep traveling.

## Novice Sled Dog Training

Lee and Mel Finback

Curt and Mel Dog Training

Raymond Thompson

each \$2.25 postpaid

from: Raymond Thompson Co.  
15815 2nd Place West  
Alderwood Manor Sta.,  
Lynnwood, Washington 98036

Novice Sled Dog Training

## Alaska Wilderness

bob marshall's wanderings in the brooks range, with a good introduction that lays down the dangers of ramming a pipeline through the wilderness without knowing much about pipelines or wilderness, ecology at the practical level.

—jd  
from:  
University of California Press  
2223 Fulton Street  
Berkeley, California 94720  
16 West 45th Street  
Room 701  
New York, New York 10036

or WHOLE EARTH CATALOG

## Alaska Wilderness

Robert Marshall

1955, 70, 238 pp.

\$2.25 postpaid

from:  
University of California Press  
2223 Fulton Street  
Berkeley, California 94720  
16 West 45th Street  
Room 701  
New York, New York 10036

or WHOLE EARTH CATALOG

## Handbook for the Alaskan Prospector

longstanding fantasy: learn a little about rocks, walk, fly, out there somewhere. set up a place claim, live happily ever after, then this book let me know that i had to know more than a little about rocks.

—jd

## Hunters of the Northern Ice

For anyone wanting to stay alive around ocean ice this book is necessary; otherwise it is merely fascinating. Nelson was an eskimo for the U.S. Air Force. He spent four years engaged in the seal hunters' life accumulating polar survival lore and respect for Eskimo endurance and ingenuity. His report is as dense and pungent and nourishing as good prose. Every sentence tells you something about ice formation, ice movement, finding open water, weather forecasting, cold injury, ice camps, bird behavior, game habits, hunting techniques, . . . survival in terrain without margin.

—SB

## Hunters of the Northern Ice

Richard K. Nelson

1969, 420pp.

\$8.50 postpaid

from:  
University of Chicago Press  
5801 Ellis Avenue  
Chicago, IL 60637

Unlike the westerners with whom he has contact in modern times, the Eskimo seldom doubts what he has been told, and especially if they are his elders. Thus, without previous actual experience in a given situation he will unquestioningly respond to it in the way that he has been told. The outsider, on the other hand, continually frustrates the Eskimo's desire for these instructions and attempting to formulate original solutions which he believes to be better. Those who live with Eskimos over a long enough period find themselves questioning less and less, and following whatever they are told to do more the more experienced native companions.

Returning to the ice again after retrieving a seal with an *amikaahuk*. The man at the left spreads his legs wide to prevent his breaking through the thin ice. He will use the hook of his unskid to draw the boat up onto the ice.

Our routine in camp was the result of many a night out in the deep snow. We would start with nothing but two bundled sleds, a wilderness in which a shelter had never yet been erected, and more (Ernie) or less (I) personal compulsion to combine the two into something safe and comfortable. Our procedure generally began by Ernie tramping down with his snowshoes a space big enough to pitch the 9 by 9 tent, with a line extra thrown in to prevent our sinking clear to our waists the moment we stepped outside our tent. Then we usually hitched the tent to trees by ropes at either end of the ridge, and stretched out the wall ropes to trees, shrubs, or specially cut poles, whichever happened to be most handy. Meanwhile I would hack down a green spruce for blocks on which to set the stove, saving the boughs to spread on top of the snow inside the tent. Ernie would cut more boughs, and soon we would forget we were roosting on snow, unless we happened to look under the stove.

Before we started out in the morning, Ernie always filled the stove with shavings, kindling, and dry sticks of wood, so that once it was set up and the stovepipe attached at night, we would have a roaring fire in a few moments. Getting a fire started quickly was most important in really cold weather. Even in relatively mild weather, the sooner the fire got going the better, because all cooking had to wait until we had melted enough snow to get the water we required. For melting the snow we used five-gallon gasoline cans, with one side cut out. Each night we used three of them, half full of water, two for cooking dog feed and one for ourselves.

But with melting the snow our nightly task was far from finished. Wood had to be cut. The dog had to be unhitched and tied to trees. Spruce-bough bedding had to be prepared for them. Then we had to take in our own bedding and spread it out on our boughs. We had to scrape the snow from our socks, overalls, and moccasins, and hang them up to dry. When a little of the snow was melted we started the tea water, and after that the rest of the supper. While we were eating and afterward, the dog feed would be cooking. After supper there would be dishwashing, sewing, repairing snowshoes, and—most tedious of all—crawling, head first, into a sleeping bag to change films in total darkness. When the dog feed was done we would take it outside, pour it into separate pans for each dog, and let it cool. Just before going to bed we would save it.

This may sound like a lot of work, and actually we were kept busy until ten or eleven o'clock. Nevertheless, the evenings were very pleasant. Ernie was a simple but excellent cook, and the meals he prepared added real joy to our life after a day of mauling. The piece de resistance of our all-crawling, head first, into a sleeping bag. Ernie believed it essential for healthy camp life to avoid too much frying, and above all to avoid burned grease. The meat was tender sheep, which Ernie had shot late in the fall. With the natural cold-storage facilities of the Arctic there was no trouble in keeping meat all winter. We varied our suppers by boiling lima beans, peas, dried vegetables, rice or macaroni with the meat. One portion lasted us for two nights. On the second night it was only necessary to thaw out and heat what was left from the first. The same was true of fruit. We always had a pot of dried apples and cranberries cooked and ready for immediate use. The only fresh cooking necessary for supper on the second night was tea, biscuits, and sometimes rice or macaroni.

—jd

## Handbook for the Alaskan Prospector

Ernest Wolff

1969, 400 pp.

\$6.00 postpaid

from:  
The Mineral Industry Research Laboratory  
University of Alaska  
College Alaska 99701

or WHOLE EARTH CATALOG

## Cache Lake Country

an illustrated seasonal diary of lake country tricks and tips, written by a mellow, contented, man, who loves the woods, knows his subject, and writes pretty well too. kane's illustrations are the nicest i've seen. the book makes me want to learn how to swim.

—jd

## Cache Lake Country

John J. Rowlands, Henry B. Kane

1947, 59, 272pp.

\$5.95 postpaid

from:  
W.W. Norton and Company  
55 Fifth Avenue  
New York, New York 10003

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## WILDERNESS EDITION

Life in the North Woods

—jd

## Cache Lake Country

John J. Rowlands, Henry B. Kane

1947, 59, 272pp.

\$5.95 postpaid

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W.W. Norton and Company  
55 Fifth Avenue  
New York, New York 10003

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from:  
University of California Press  
2223 Fulton



## Camping and Woodcraft

How could anything written in 1916 still be so useful? One, it is a masterpiece. Two, in Kaphart's day, when you went camping you really disappeared, so there's a valid nostalgia factor. But the main thing is, the book survives on its wealth of specific practical lore. Game: find the information that is wanted, sort it from the information that is correct and available nowhere else.

—SB

## CAMPING & WOODCRAFT



Camping and Woodcraft  
Horace Kaphart  
1917, 1921, 1967, 470pp.

\$6.95 postpaid

from:

The Macmillan Company  
Front and Brown Streets  
Riverside, Burlington County  
New Jersey 08075

or WHOLE EARTH CATALOG



Fig. 185.—Splicing thongs

Men working hard in the open, and exposed to the vicissitudes of wilderness life, need a diet rich in protein, fats (especially in cold weather), and sweets. This may not agree with theories of dietitians, but it is the experience of millions of campaigners who know what their food means. A low-protein diet may be good for men leading soft lives, and for an occasional freak outdoorsman, but try it on an army in the field, or on a crew of lumberjacks, and you will face stark reality.

## Skills for Taming the Wilds

Bradford Angier's outdoor books are generally thin, sketchy, and repetitive from book to book. This appears to be the least diluted one. Applicable mainly to northwoods, where indeed Angier has lived for many years.

—SB

## Skills for Taming the Wilds

Bradford Angier

1967, 280 pp.

\$6.95 postpaid

from:

Stackpole Books

Harrisburg, PA 17105

or WHOLE EARTH CATALOG



Water Cross (Nasturtium)

Stopper Knot

When campfire or cabin smoke, after lifting a short distance with the aid of a breeze, beats down over you, it is a sign of approaching storm. On the other hand, steadily rising smoke prognosticates fair weather.

## Wildwood Wisdom

This is the only book of wilderness I've ever read from front to back, mainly because one third of the book is pictures, and I got sucked from one picture to the next, all the way through. Angier assumes that you are in the wildwood because you want to be, and that the woods dictate as much a style of living as do the sidewalks of Omaha, if you are going to live anywhere, and do it with style, like an Indian, with decorum, simply, carefully, quietly, but with style.

—Id

Colorful blankets, striped or in plain colors, may be cut up into the patterns shown in the drawing. The front is made in two parts, the back in one. The wide circular collar is made double thickness. Large patch pockets are sewed on the front sections before the coat is stitched together. The equilateral pieces of blanketing at the shoulders are placed there to act as draw, so that the rain will not soak in at the shoulder seams. Coarse blanket fringe may be stitched on at the front and back, as well as the belt loops, if desired. Double-stitch the front and back together at the shoulders. Sew the sleeves and the epaulettes double at the armholes, and double-stitch the circular collar to the coat proper. If a belt is wanted, sew double thickness of the blanket together about four inches wide. The belt may be fastened with buttons or it may be made long enough for a sash. A colored yarn tassel ball may

## Wildwood Wisdom

Ellsworth Jaeger

1945, 69; 491pp.

\$6.95 postpaid

from:

The Macmillan Company  
866 Third Avenue  
New York, New York 10022

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## WILDSIDE WISDOM

ELLSWORTH JAEGER

1945, 69; 491pp.

\$6.95 postpaid

from:

The Macmillan Company  
866 Third Avenue  
New York, New York 10022

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be attached to the belt ends. Buttons and buttonholes must be provided on the front and on the patch pockets. Now stitch the sides of the coat and the sleeves, starting at the bottom and continuing upward and along the sleeves. Turn up the cuffs of the sleeves to the desired width and fasten them with a few stitches. A French-Canadian capote, or hood, may be added, or the illustration shows how it is made. This fits over the upturned collar and may be fastened to the collar with a few small buttons, or it may be worn by itself and held with tie-strings under the chin. This briefly completes the job; and a colorful, picturesque, and very warm addition has been made to your outdoor wardrobe, one which can be worn for many years.

In Alaska, all animals leave for the snow-line as soon as the mosquito pest appears, but the enemy follows them even to the mountain tops above timber-line. Deer and Moose are killed by mosquitoes, which settle upon them in such amazing swarms that the unfortunate beasts succumb from literally having the blood sucked out of their bodies. Bears are driven frantic, are totally blinded, mire in the mud, and starve to death. Animals that survive have their flesh discolored all through, and even their marrow is reduced to the consistency of blood and water. The men who penetrate such regions are not the kind that would allow toil or privation to break their spirit, but they become so unstrung from days and nights of continuous torment inflicted by enemies insignificant in size but infinite in number, that they become squalid, desperate, and sometimes even weep in their helpless anger.

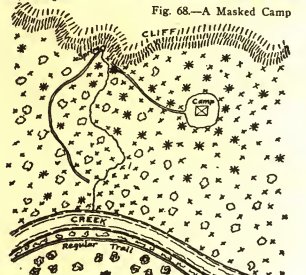
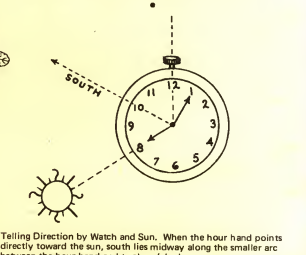


Fig. 68.—A Masked Camp

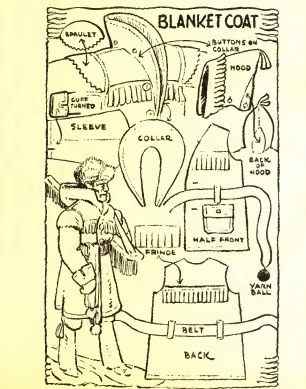
Trees and Lightning.—I have never seen, nor heard of, a beech tree that had been struck by lightning, although beeches are plentiful on many battle-scarred mountains where struck trees of other species can be noted by the score.

One glance at a camper's fire tells what kind of a woodsman he is. It is quite impossible to prepare a good meal over a heap of smoking chunks, a fierce blaze, or a great bed of coals that will warp iron and melt everything else.

It usually requires a disproportionate amount of energy to travel straight up and down hills, as the trails of animals reveal they well know. You generally will do best in the long run either to zigzag or to slant off at a gradual pitch. Energy will be conserved if you can proceed without cutting across major drainage systems. As for resting, this is more beneficial when ended frequently for brief periods. Hurrying ahead for long stretches and then taking prolonged breathing spells tends to cause the muscles to stiffen.



Telling Direction by Watch and Sun. When the hour hand points directly toward the sun, south lies midway along the smaller arc between the hour hand and twelve o'clock.



The Golden Book of Camping

As usual, wonderfully clear information from Golden Press. I'd have put this book in the Learning section of the CATALOG only it has better camping information than the authoritative tomes here. Some tips I've never heard of anywhere before. Profusely illustrated. I can hardly wait for the Golden Book of Dope.

The Golden Book of Camping

William Hillcourt  
1971, 104 pp.  
\$3.95 postpaid

from:  
Golden Press, Inc.  
850 Third Ave.  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



IF YOU SHOULD STUMBLE AND SPRAIN AN ANKLE, DO NOT TAKE OFF YOUR SHOE. INSTEAD, TIE A BANDAGE FIRMLY AROUND ANKLE AND SHOE BOTH.

Being Your Own Wilderness Doctor

My husband suggests you include *Being Your Own Wilderness Doctor* by good old B. Anger and Dr. E. R. Kodet. The medical guide is very up-to-date, better than *How To Survive In The Woods*, we feel. It is written with the problems (probably) encountered while hiking back in the woods. It is one we want to add to our personal library as soon as it allows. In the front is a quick-reference index of stuff. While the supra-organic flunk won't be too keen on it because of its emphasis on new drugs, the rest of the info provided (sprains, dislocations, fractures, rashes, etc.) certainly would be useful. I worked two years in a hospital emergency ward and to me, this is about the best emergency guide I've come across that is written for non-medical people.

Being Your Own Wilderness Doctor

E. R. Kodet, Bradford Angier  
1968, 127 pp.  
\$3.95 postpaid

from:  
Stackpole Books  
Camden & Keller Sts.  
Harrisburg, Pa. 17105

or WHOLE EARTH CATALOG

The following medicine chest should be adequate for a longer stay, or when several people will be in the party. Double or triple the quantities of drugs suggested for the light kit. Otherwise, make up as follows:

- Aspirin— 100 tablets will be a good idea.
- Aspirin with codeine— twenty-four.
- Darvon Compound— Eighteen tablets in addition to the above codeine will be adequate.
- Compazine— twelve.
- Lomotil— thirty-six.
- Sulfasuximide— Fifty tablets for one individual, one hundred for several.
- Bismuth and pectin— eight ounces, mixed in equal parts.
- Probanthine— thirty-six.

The Sierra Club Wilderness Handbook

Practical information distilled through years and years of Sierra Club outings. Covers a wider range (worners, burros, rivers, ... ) than Colin Fletcher.

—SB

The Sierra Club Wilderness Handbook

David Brower, ed.  
1951, 1968, 317 pp.  
\$9.95 postpaid

Good pack horses and mules can carry a pay load of 200 pounds when expertly guided. One hundred and seventy-five pounds should be considered a maximum load on one's first trip. The pack train can be counted on for 15 miles a day on good trails if it keeps pushing. These animals walk at a good clip and, unless their handlers are fast hikers, all personnel should be mounted. This becomes more important as the size of the party increases. Mules are led singly by pedestrians or are tied in groups of not more than five animals and are then led by a man on horseback. This is the "stringing" of the professional packer.

In addition to standard equipment, it will be wise with preschool-age children to take along some portion of the home environment whose value is purely emotional, even at the expense of inconvenience and irreparable damage to the articles; these might be, for example, teddy bears, toys, books, familiar clothes, or eating utensils.



1. USE FELLING AX AS PLUMB LINE TO DECIDE FALL OF TREE.



European Lightweight Camping Supplies:

Thomas Black and Sons, Port Glasgow, Renfrewshire, Scotland  
Bucks, Stockport, Cheshire, Ireland  
Campters, 16 Buckingham Palace Road, Victoria, London  
S.W.1, England

TO KEEP FROM BEING SCALDED, USE A MOP MADE BY TYING A WAD OF CLOTH TO A NOTCHED STICK.

CLEAN THE DISHES IN HOT WATER CONTAINING A DETERGENT OR SOAP.



IN LIGHTWEIGHT CAMP, PLASTIC SHEET TAKES PLACE OF HEAVY POTS. MAKE TWO RINGS OF STONES OR FRAME OF LOGS. DRAPE SHEET TO FORM TWO BASINS. PUT DETERGENT IN ONE, SANITIZER IN THE OTHER.

Pyridium— Eighteen. Take one every four to six hours. It causes stomach irritation, take with food, otherwise as needed. Pyridium will stop all urinary burning and distress. It will color the urine red.

Gantrisin— Fifty. These are for treatment of a urinary tract infection, as well as for the continued treatment of strep infections, pneumonia, and the like. They can be used if only a few antibiotic tablets are carried, and the condition requires additional treatment. Some individuals are sensitive to sulfa. Gantrisin should be discontinued if there is rash, fever, that comes and goes when the sulfa is used, or nausea or vomiting.

Erythromycin— Twenty-four or thirty-six tablets, depending on the remoteness and the number of people.

Pyribenzamine— Thirty-six.

Dexedrine— Twelve.

Coricene (prednisolone)— Thirty.

Sturlet vaseline— One tube.

Baciguent— One one-ounce tube of this antibiotic ointment should do.

Zinc oxide— One tube, for chapped lips or for mixing in equal parts with Eucogen to make a temporary tanning for a tooth.

Eucogen— One-quarter ounce bottle will be adequate.

Oil of cloves— small bottle, as only a few drops are needed for toothaches.

For surgical supplies, it is suggested that you take both a two-inch and a four-inch Ace or similar elastic bandage. Although optional for a short trip, these are very handy for holding splints, etc.

The amount of gauze and tape to pack along is optional, particularly as it is always possible to improvise. For a long stay, two packs of each type of future material are recommended.

There'll want a thermometer. Check this before taking a temperature and first shake it mercury down, if necessary.

There is no absolute normal temperature. Ignore the red marks on the thermometer. They do not mean fever unless the temperature is over 99.6°. Keep the thermometer in a case and out of the sun. In most cases, a temperature taken under the tongue or armpit will suffice.

Costs

Eighteen dollars should do it for the light kits, plus several dollars more for the snakebite kit with suction cups. Add eight to ten dollars for antivenom.

At Home in the Wilderness

Unusual outdoor book, written by Sun Bear, who edits a pan-Indian magazine called *Many Smokes*. His lore is most relevant to North Woods and the Great Basin.

—SB

At Home in the Wilderness

from:  
Ballantine Books  
101 Fifth Avenue  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

from:  
Naturegraph Publishers  
8339 W. Dry Creek Rd.  
Healdsburg, CA 95448

or WHOLE EARTH CATALOG

As a preference of weapons, I like a .22 bolt action rifle for providing the weekly meat render with small game. I prefer this to automatic as you are not as inclined to waste shells. When deer or big game hunting, I like a 30-30 for open country and use a shotgun in brush country with slugs or buck shot. Sometimes in the brush country, when deer hunting, I still carry a singhnot for the brush country. I use old inner tubes, I use a surgical rubber for the singhnot. The new type of inner tube does not have the strength that the old post-war inner tube had. Many a ruffed grouse, gray squirrel or rabbit has found his way to my table, thanks to the singhnot. Back during the depression—W.P.A. days, there was hardly an Indian working on the road crew that did not carry a singhnot to get a little camp meat.

Fire Without Matches and Books

A *brushless hour spent with the WE catalog indicates that some readers are on the fire-without-matches kick. For what they're worth, a few suggestions.*

Ordinary household steel wool— of the kind available in any grocery store, is the best *finger over mented* if you really want to go first *spark* into the *steel wool* kind that cabinetmakers use. Scratch a *spark* into a *steel wool* of steel wool and watch it glow! Whip the *steel wool* in a *first-hand* of dried grass (say, blow on it for ten seconds, and presto! Instant fire.

And where do you get the sparks for the above process? From a *cigarette lighter*, man! A cheap cigarette lighter, used without fuel, provides an excellent source of sparks. Some spare flints can be carried inside the lighter, down where the cotton filter is located, and you have a lifetime source of sparks— so much harder than a *hunk of quartz* and a broken fire. Of course, you can fill your lighter with fluid if you want, but that takes all the fun out of it. . .

And now a real survival item: the reflector in a flashlight (headlight, etc.) can start a fire for you on a sunny day. Simply take your flashlight apart, aim the reflector toward the sun, and poke a bit of tinder up through the hole where the bulb fits (a cigarette works fine), extending it no more than half-an-inch (less may work better) and presto! again. (You don't actually get fire this way; what you get is a lighted cigarette which, with patience and under the steel wool or dry grass should make fire for you. . .) This, of course, is an adaptation of the "Solar cigarette lighter" that was common in novelty shops a few years ago.

Joe Smith  
Hood River, Oregon

Wilderness Camping

A magazine by this title is starting up. \$3/yr (bimonthly).

from:  
Wilderness Camping  
Box 1186  
Scottia, N.Y. 12302

"Mrs. Godsey wants to see me dead," said D.R. "I've known that much all along."

David shook his head, as if from profound sadness. "Well," he said, "personally, I think we ought to quit thinking about ourselves and put our minds on Enmit. He's the one we've come down here to help."

"He's probably in on it too," said D.R. "You are too, and I know Virgil is too. On Enmit. He's a son of a gun."

David looked at D.R. grinning. "You want to know what I think?" he asked.

D.R. waited for him to say, "I think you're stomped on your ass." He laughed, but D.R. was not amused. "All I know," said D.R., "is I don't trust you for a minute, and I'm not getting out of this bus till I feel protected from all this bullshit going on."

There was a little silence between them, and then, in David's tone and manner changed. When he spoke again his voice had a new edge, a touch of cold impatience. "Let me ask you a question," he said.

D.R. waited for him to ask it.

"How'd you like it if I want in and get Mrs. Godsey, and told her to come out and talk to you about the building?" he asked.

"D.R. didn't wait for him to finish. He had seen the evil in David's eyes, he knew for sure now that David was in on it, and that he must run to get away or he would die. Without looking at David again he flung the door open, leaped out and took off running, with David chasing after, close behind.

from:  
Camp Nomads



## The Book of Survival and The Survival Book

One barometer of people's social confidence level is the sales of books on survival. I can report that sales on *The Survival Book* are booming; it's one of our fastest moving books. What's weird is that it's almost pure romance to buy *The Survival Book*, which is an excellent handbook for Air Force pilots downed in remote regions. The other book we list, *The Book of Survival*, is far more practical and far better organized. The threats it deals with are closer and realer: burning buildings, freaked humans, speeding cars, dogs, floods, electricity, poison—genuine homey hazards. From what we can see, people are less interested in survival and more interested in the return of the frontier or maybe a sudden desert island. Far chance.

—SB

### The Book of Survival

Anthony Greenbank

1967, 223 pp.

\$ .95 postpaid

from:

The New American Library, Inc.  
1301 Avenue of the Americas  
New York, N. Y. 10019

or WHOLE EARTH CATALOG

### FIGHTING DRUNK

Humor.

If involved in brawl, drunks can offer astoundingly strong grip. Hit head in stomach and this may make him sick.

Final consolation: a REAL ghost . . .

- Will disappear if you approach it.
- Can do you no physical harm because it leaves nothing earthly—not even messages or footprints.
- Will not cast a shadow, will look quite substantial rather than misty, will not ignore you; will not carry its head tucked under an arm.
- Is all in YOUR mind anyway



Kick on head previous

When lying on the ground and being kicked try to keep rolling, shielding parts being kicked with arms. BUT always protect head as priority. Clasp base of skull with both hands, bring wrists across ears and sides of head and press elbows together. Bring knees up, crossing ankles to save genitals.

In all attacks it pays to shout/pasp/yell more than you need. Fear pain. Especially when on receiving and lying on ground and being kicked). Attacker may be satisfied sooner when you appear in agony.

### SELF-PRESERVATION

Crushed in crowd

Aim to be like heavy in rough sea—where side is extremely powerful. To go under means drowning on suffocation and trampling. Brace like a powerful spring (as shown).

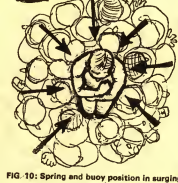


FIG. 10: Spring and buoy position in surging crowd



FIG. 84: Making footstool

### Survival Evasion and Escape

Here's one for our customers who plan to jump bail or escape from jail. Thoughtfully prepared by the U. S. Army. Three-fourths of the book is about living off the land, with edible plants illustrated in color. Pretty damn good book.

—SB

### Survival, Evasion, and Escape

1957, 1965, 1969; 430 pp.

FM No. 21-76

\$3.50 postpaid

from:

Superintendent of Documents  
U. S. Government Printing Office  
Washington, D. C. 20402

or WHOLE EARTH CATALOG

Casting

Frequently the duplication of buttons, insignia, seals, medals, etc., is necessary to complete evasion disguise. Casting these items in soft metal generally is the best method, and the procedures involved require very simple materials.

- Lead, solder, and zinc are the easiest and most common materials to work with. Lead can be obtained from pipe or plumbing fittings.
- Lead from underground electrical wire, and from leaded window frames. Solder may be melted from the seams of tin cans. Zinc

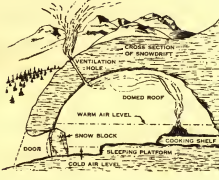


FIG. 9: Dome

frequently is used on wash-bowls, metal fittings, metal containers and some window and roof construction.

- Make a mold by using clay, soap or a large potato. The material used is cut in half, and half of the design is cut into each piece so that when fitted together the hollowed-out parts will have the form desired. In all molds, a hole must be made in one side through which to pour the metal; a small hole is made in the other side to allow air to escape. Molds made of clay should be baked to harden. After being poured and allowed to cool, finish the casting by trimming with a knife or file and painting or polishing as appropriate.

### Life Support Technology, Inc.

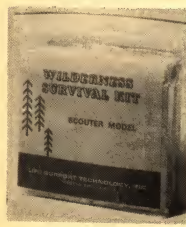
The most sophisticated survival kits and equipment.  
Designed for bush pilots and the like

—SB  
[Suggested by Alan Kalker]

Catalog

free

from:  
Life Support Technology, Inc.  
4630 S. E. Rowell St.  
Portland, Oregon 97206



\$6.95

### CONTENTS

- Canvas Carrying Case
- Converts to Cold Weather Mukluks
- Felt Pads (2-12" x 12")
- Freeze-dry Ratons (5 cans)
- Hard Candy (5 packages)
- Cooking Container (1)
- Snare Wire (15 feet)
- Matches (20)
- Plastic Match Box (1)
- Repair Tape (10 feet)
- Sharpening Stone (1)
- Nails (3)
- Bow Scout Pocket Knife (1)

- Plastic Whistle (1)
- 550 Parachute Cord (50 feet)
- Gilt Nit (1)
- Fire Start (3)
- Aluminum Foil (15" x 24")
- Wire Saw (1)
- Hudson Bay Hatchet (1)
- Plastic Canteen (1)
- Pilots Signal Mirror (1)
- Silva Compass (1)
- Mosquito (insect) Repellent (1)
- Mosquito Headnet (1)
- Tissue (1)
- Plastic Spoons (2)

- Candle (1)
- Plastic Sheeting (9' x 12')
- Fishing Kit (1)
- Sewing Kit (1)
- Surgical Tubing (4 feet)
- Hack-saw Blade (1)
- Pencil (1)
- Rescue Blanket (1)
- Slingshot Pouch (1)
- "tinyMIGHT" Aerial Signaling Device w/6 Aerial Flares
- Fuse Flares (2)
- Wilderness Survival Manual (1)
- Shipping Weight: 11 pounds

M21 "Economy" Aeronautic Life Support Unit \$89.50

### The Survival Book

Paul Neubitt,

Alonso Ford,

William Allen

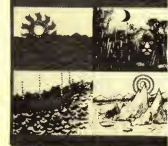
1969, 338 pp.

\$1.95 postpaid

from:

Funk & Wagnalls  
c/o Thomas Y. Crowell  
201 Park Ave. So.  
New York, N. Y. 10003

or WHOLE EARTH CATALOG



EXPECTED DAYS OF SURVIVAL AT VARIOUS ENVIRONMENTAL TEMPERATURES  
AND WITH VARYING AMOUNT OF AVAILABLE WATER

	Max. daily in shade temperature, °F	Available water per man, U.S. quarts						
		0	1	2	4	10	20	
NO WALKING	120	2	2	2	2.5	3	4.5	
	110	3	3	3	3.5	4	5	7
	100	5	5.5	6	7	8.5	13.5	23
	90	7	8	9	10.5	15	19	29
	80	9	10	11	13	19	29	
	70	10	11	12	14	20.5	32	
	60	10	11	12	14	21	32	
	50	10	11	12	14.5	21	32	
WALKING AT MODERATE PACES WITH THERMAL PROTECTION	120	1	2	2	2.5	3	4.5	
	110	2	2	2.5	3	3.5	5	7
	100	3	3.5	3.5	4.5	5.5	8	11
	90	5	5.5	5.5	6.5	8	11.5	15.5
	80	7	7.5	8	9.5	11.5	15.5	20.5
	70	7.5	8	9	10.5	13.5	19	25
	60	8	8.5	9	11	14	19	25
	50	8	8.5	9	11	14	19	25

### DO'S AND DON'TS FOR THE TRAVELER IN ARABIAN DESERTS

Here are a few of the most important don't's. In general they apply to the desert's everywhere.

- Don't reprimand an offender in front of other people.
- Don't draw and pictures or maps with your foot—stoop down and draw with your right hand.
- Don't swear at a native.
- Don't expose the soles of your feet to others. Sit tailor fashion or on your heels.
- Don't ask about a man's wife.
- Don't throw a coin at a man's feet. That is insulting.
- Don't try to gamble. It is forbidden.
- And here are a couple of Do's worth remembering.
- Do have patience when dealing with desert people.
- Do act friendly.

### sand dunes in the Gobi Desert



A "Panic Panel," 20" square, weighing 13.5 lbs., containing a fire extinguisher, a first aid kit, poison antidote, a resuscitator, an aerosol spray, an emergency bar, a torch and batteries and candles and matches, is now on sale in the USA. Cost \$29.95. Available from M. C. DISTRIBUTORS, 4104 N. College Avenue, Indianapolis, Indiana 46203.

Architectural Design, p. 88

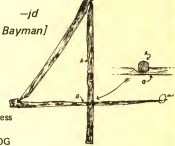
Olson assumes that you get stuck out there with nothing but some knowledge, no matches, food, compass, toothpaste, or magazines, scrounge the tools food and shelter. good bunch of pictures and diagrams. sort of a purists book. for someone who is thinking about stopping along the road on the way to work some day, and just walking out into the wilderness.

[Suggested by W.H. Bayman]

Larry Dean Olsen  
1967; 188pp.

**\$3.50** postpaid

from:  
Brigham Young University Press  
Provo, Utah 84601  
or **WHOLE EARTH CATALOG**



At least once in life, every man, woman and child should know (1) the feeling of complete dependence on the bounties of nature, (2) hunger and herdsip, (3) the meaning of total self-dependence, and (4) the personal inventiveness required to wrest a living from nature. Each should have the opportunity to learn the use of his own two hands in making necessary items for comfort and survival in nature.

Few of us ever depend upon our own skills and resources for our needs. We depend, instead, upon the manufactured items of our

*This book is about people living in equilibrium with their environment. They probably had no words for garbage or waste because they used everything— cattail, tule, willow, rabbit pelts, buckskin, sagebrush bark, bones, rocks. Somehow the story of how they did it, which is told with simple words and ungimmicky photographs, reflects the expanse and serenity of the Great Basin environment and is beautiful.*

*[Reviewed by Tony Mindling]*

Margaret M. Wheat  
1967; 177 pp.

**\$10.00** postpaid

from:  
University of Nevada  
Press  
Reno, Nevada 89507

or  
WHOLE  
EARTH  
CATALOG

MARGARET M. WHEAT



Larry Dean Olsen

## OUTDOOR SURVIVAL SKILLS

civilization to the extent that it would be nearly impossible to conceive of a life without them. We marvel at the ability of Stone Age people to survive under such adverse conditions as they were usually found. We envy somewhat their ability, and deep down inside of us we hold a secret fear that somehow, someday we may find ourselves in the same situation as these primitive folk. Even worse, we may find ourselves lost in a wilderness without food, water, shelter or even the know-how to provide them. We fear the thought of getting along without our "gadgets."



When the boat was completed, Jimmy stepped in the center to form a deeper hollow. The finished boat was eight-and-a-half feet long but so light that it could easily be lifted with one hand.

To play the game, two people on one side each concealed a pair of sticks or "bones" within their closed fists. One bone of each pair was plain, the other ornamented. The guesser on the opposing team had to choose in which hands the unornamented sticks were hidden. If the guesser were correct, his side was awarded a tally stick. If not, his side lost a stick. The side winning all ten tally sticks claimed all the bets. The singers opposing the guesser shouted, waved, and beat the logs to encourage him. The sat players, apparently oblivious to the distractions, concentrated on their choice. It is remarkable how often a good guesser won. Winners were never congratulated, nor were losers ever consoled. The game is still played in the Great Basin with stakes often running into hundreds of dollars.

Yerger's Supplies, Box 8138, Anchorage, Alaska 99504. Catalog contains Air Force Survival Equipment selections for light aircraft.

Survival Equipment Company, Division of Victor Tool Company, Oley, Pennsylvania 19547. Survival equipment for aircraft owners and pilots. Kits, tools, & books. Everything from a one-man life raft model PK-2 at \$123.00 to an orange smoke bomb for \$2.25. In sixteen pages this is a very complete survival equipment company. Many kits are useful for any wilderness traveler on foot or horseback, or river float trip.

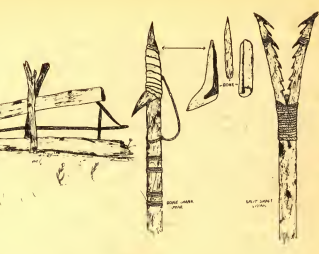
Northwest Wilderness Survival Schools, Life Support Technology, Inc.  
4530 SE Roswell Street, Portland, Oregon 97206. Summer Sessions  
\$60.00. One week. They also have survival kits for snowmobiles  
along with a film on winter survival available for rent.

- |   |         |
|---|---------|
| Survival Research Laboratories, 17 Marland Road, Colorado Springs, Colorado 80906.          |         |
| A. Individual one man three day survival kit designed for the average Cross Country flight. | \$37.85 |
| B. "Trail Kit" for the shirt pocket   | 3.85    |
| C. Special information about Alaska and Canada  |         |

Earl Palmer  
Corvallis, Oregon

Are you onto a book outfit in Glendale, Az, called The Adobe Hacienda? They furnish an assortment of Survival, Herbal, Medical, Military documents and books, and their mail-order service is superior. This outfit seems to be somewhere right of the Birch Bunch, and some of their offerings are pretty scary. Nonetheless they inadvertently (what right-type would do such a thing veritantly?), feed the needs and/or curiosities of The People as well. Their address is: Rt 3, Box 517, Glendale, AZ, 85301.

S. Stanton  
Pacific Grove, CA



... it's sort of a how-to-do-it-in-Australia, which turned me off at first until I read it a little more thoroughly. The problem with most books on this subject which are available in this country is that they are basically diliteant's manuals; they tell you how to live in the open for a week or two, but always presuppose that sooner or later you're going to go back to your Telegraph Hill apartment and take a nice hot shower. Australia, however, is a different scene, more like the U.S. a hundred years ago, when quite large numbers of people were accustomed, for various reasons, to living out in the open. I don't know if you've ever read "The Saga of the Bushmen" or "The Saga of the Redskins," but I think that what more and more of our brothers and sisters are doing or thinking about doing (or have to do.)

[Suggested and reviewed by Roland Jacopetti]

Richard Graves  
300pp.

**\$10.30** postpaid

Dymock's Book Arcade Ltd.  
Sydney 2000, Australia

- |                          |                           |
|--------------------------|---------------------------|
| Book 1. Ropes & Cords    | Book 6. Knots & Lashings  |
| Book 2. Huts & Thatching | Book 7. Tracks & Lures    |
| Book 3. Campcraft        | Book 8. Snares & Traps    |
| Book 4. Food & Water     | Book 9. Travel & Gear     |
| Book 5. Firemaking       | Book 10. Time & Direction |



## A TOOTHLESS MOUTH

Half a mile up Trace Fork from the store D.R. stopped to hide and read a while behind a rusted hulk that used to be a '47 Ford. There was a four-room house with the roof caved in, well hidden by the trees behind he might have gotten away, but he didn't want to go places he might be close to, with his eyes. He hadn't seen David behind, or heard him, in several minutes now, but he knew that he was somewhere close around. David had been right behind him the first several hundred yards, but then D.R. hed left the road and plunged over the bank into Trace Fork creek. The banks were thick with weeds for David to hide in, and the water was slimy-yellow from the strip mining operations at the headwaters. D.R. slopped up the bank for perhaps a hundred yards, then scrambled up the creek again and hid behind

D.R. knew he was close to the homeplace now, but the hollow the creek flowed through had been so disfigured by the strip mining he didn't see a feature on the landscape that he recognized. The ridges where the Trece Fork waters gathered were so uniformly scarred they looked like rims of craters on the moon. The guts of entire mountains had been ripped out and strewn about like so much worthless spoil. Every roll and fold, every feature of the drainage that might have framed a context and established where the homeplace was had been torn away by bulldozers or smothered by a bythoms of overburden. A slope that might have been the cresture of a mountain or the rim of a lake, by shattered rocks and jagged ends of broken trees sticking up like legs of mules slaughtered in a cruel, old-man's land.

D.R. heard a snapping noise behind, then David yelling, "Hey! D.R.! Where are you?"

His voice came from the old abandoned house not fifty yards away. It was as if the house itself had yelled. Its vacant windows were like eyes of some old dead man, its door a toothless mouth that never closed. "Wait up for me, okay?" yelled the mouth as David stepped through it and headed through the weeds toward D.R.'s hiding place.

*Thought you might like a great recipe for survival food for anyone*

going off into the woods for a long jaunt— cross country ski trips, hikers, mountain climbers, cycle trips, snow mobiles, etc. It doesn't spoil, tastes not too bad, and it keeps forever— well, darned near it.

- 2 tablespoons wild honey (same will do, but not the flavor)
- 2 cups oatmeal (or bran or wheat germ)
- 2-1/2 cups powdered milk
- 1 cup sugar
- 3 tablespoons of water
- 1 package instant oatmeal (I use instant oatmeal)

Boil the water and honey together, then add jello. Mix dry stuff together, stir in water mixture. Mix well—probably with your hands. You might need a drop more water but don't add too much or it has to be dehydrated. You might like to add a little grated orange or lemon peel. Now spread the stuff into a 9 x 13 cake pan and put it in an oven at about 200 degrees. Leave the door ajar and let it "cook" for about six hours. Be sure to cook it that long or it won't keep. When done, let it cool and then cut it into 2" bars. Use them in foil and they will keep for years—Eats is packed with it. My really one makes a meal. On a camping or backpacking trip you can crumble one and add boiling water and have a hot meal.

Lee Cole  
Portland, Oregon

Survival  
Nomadics 275





## Knives

In March 1970 Catalog I noted the mention of Custom Knife maker.

As with all things there are those who demand the "best" and for these "users" or "taste at any price buds" there is a fine selection. The post war success of "Randall" of Florida brought on dozens of Custom Knife makers a few of whom I shall list:

**Arnold Made Knives**  
Box 406  
Grand Prairie, Texas  
75060

**Clyde Fisher**  
Rt. 1 Box 170  
Victoria, Texas 77901

**Buck Knives, Inc.**  
6588 Federal Blvd.  
San Diego, Calif. 92114  
(Sporting goods stores)

**Dennis F. Foreman**  
155 Ave. "U"  
Brooklyn, N.Y. 11223  
(March '70 Catalog p. 14)

**Morsh Sports Equipment**  
Box 406  
Redmond, Washington

**Randall Knives**  
Box 1988  
Orlando, Florida

**Stone Knives, Inc.**  
703 Floyd Rd.  
Richardson, Texas

**Ralph Bone Knife Co.**  
806 Ave. "J"  
Lubbock, Texas 79403

**M.W. Sequine**  
Juneau, Alaska

**T.M. Howell**  
139 St. Downe Pl.  
Bend, Oregon 97701

**Draper Custom Knives**  
Ephraim, Utah 84627

**D.E. Henry**  
300 St. Henry Dr.  
Fremont, Calif. 94538

**Hibben Knives**  
Marion, Utah 84642

**M.W. Moran Jr.**  
Rt. 5  
Frederick Md. 21701

**Lee Olsen Knife Co.**  
Howard City, Mich. 49329

**Ruana Knife Works**  
Bonner Montana 59823

Al Fry  
Perris, CA.

## Shotgun News

Best paper out for gun bargains.

[Suggested and reviewed by  
Rainbow People]

## Shotgun News

\$3 /yr (bi-weekly)

from:  
Shotgun News  
Box 878  
Columbus, Nebraska 68601

Karma

Note.

We list Shotgun News with the expectation that all you're interested in shooting is inanimate targets and food. If you buy a gun through this source for any other reason, you're loading our Karma as well as your own.

## Shotgun News

In case you can't get samples, here is our latest copy of "Shotgun News". Because of gun laws—some of the guns offered must be brought through a licensed gun dealer. In a small town such as ours, this can be done through a dealer who carries firearms as a sideline (i.e. Hardware Store) and they will do it at a courtesy and no money involved. I sure in larger cities some sort of deal which keeps both the dealer and the buyer happy can be worked out since they are mainly a pick up point for the gun and may have to do a little paper work to satisfy the man. But of course you will see, Shotgun News is not limited to guns.

More on the Dixie Gun Works catalog. They carry parts, machinery, books on making guns as well as antique guns. Also black power ball and cap guns are for people who feel the animal should get half a chance in the hunt since they take a little skill and find a bow not their game. They are good humane rifle but you only get one shot.

Rainbow People

## Indian Ridge Traders Knife Blades

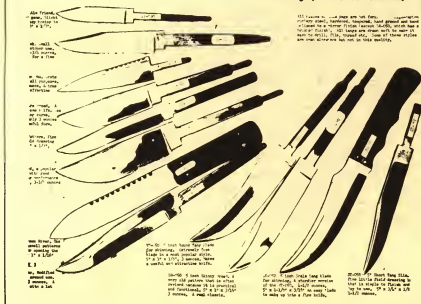
An outfit called Indian Ridge Traders in Ferndale Michigan. IRT's specialty is a line of unfinished knife blades made by Hodgkinson in Sheffield, England. IRT is a small neo-co-op organization which I have dealt with over the last couple of years. Their prices are low, the service fast and friendly, and best of all unlike other knife firms, no far right political bullshit.

Their blades are almost strictly high-carbon steel which although not as classy as 440C stainless is easy to work with and can be sharpened by hand in a finite amount of time, a characteristic not included in 440C's properties. A knife which I made for my own use from one of their blades, a rugged knife, has seen use in and around fresh and salt water for over a year now with negligible rusting and pitting with only a minimum of care.

Their catalog lists a large variety of blades, mostly tools with only a few weapons. If you can dig the difference. Their line of kitchen blades is especially good. They also list some knife finishing materials and suggest sources for others. One source which they suggest for a variety of wood hardwoods is the back of your friendly neighborhood Oriental motorcycle dealers. Nearly all his thrown-out crates are made of a variety of Eastern hardwoods. Their catalog is free from:

Indian Ridge Traders  
P.O. Box X-50  
Ferndale, Michigan 48220

[Reviewed by Larry Murray,  
Suggested by Cos Newton,  
John Langley and Chuck Jenkins]



## Whist Rocket

"My God! It's that-or-not!", was the reaction given to a demonstration of the power and accuracy inherent in my "Whist Rocket", an example of an old innovation, the sling shot, the creative application of a scientific principle, leverage, and a little practice can produce.

The "Whist Rocket" is an expertly crafted piece of hand weaponry superior to all others I have ever encountered, short of the firearm. It is completely rust-proof and, if the time rubber sling should break after hard, long usage, it is easily replaced with two matching lengths of surgical rubber tubing obtainable from your local drugstore.

Price—around \$2.50 from

Truman Manufacturing Co.  
2654 44th Ave.  
Columbus, Nebraska 68601

"Joe Eddy"  
Southern Illinois University

**WHIST ROCKET**  
AMERICAN PAT.  
SHOOTING SLING  
Range 225 yd.—232 yds.  
Metallic powder rubbers  
and powder rubbers  
\$2.50



**RELOADING Tools:**  
"MEG", "RCBS", "Lyman",  
"Redding", "Lee", "Tanner",  
"Miller", "Forster", "Barnes",  
"x", "Lee", "Discount  
prices! Free catalog: Es-  
man's, Pittsman, Pa. 15140  
TF-2X

Special! \$24.95 complete  
with 4x4 R.ear sights.

NOW \$24.95



Instant

1. Inver in 1 mil. bullet, instant muzzle-  
loader. 2. Inver in 1 mil. bullet, instant muzzle-  
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## 278







*def.:* A trout fly is part fur, feather, floss, tinsel, and sometimes horsehair; secured with black thread (in the jargon, 'tied') to a fishhook in hopes of replicating a bug accurately enough to fool a trout into eating it; and thereby getting caught.

Yers of trout fly like their quarry, come in schools. Three predominant (the authority for this classification is myself): (1) the "pumpkin seed" school, (2) the "pale yellow" school, and (3) the "tie a pretty fly" school. The division is normative. Adherents of (1) definitely are the elite, because they not only build big fish but also are the most successful in catching them. They are insects perking at the principles through large magnifying glasses. They are the most successful in catching them because they instruct the trout are eating this evening. They want a fun-and-father copy of the real thing. Entomology first, fly-fishing second. (2) The "pale yellow" school is the most common. They are pages 88 through 96 of Herter's *Entomology First, Fly Fishing Manual* (revised/endorsed edition), where they find explicit instructions for how to catch them. They are the most successful in catching the score other standard fly-favorites. This is a *pragmatic* method obviously. (3) The "tie a pretty fly" school is the most common. They are the most common to Southern Fly Fishing Chalk Streams and may not have much to do with the day's hatch on Big Lost River or the day's hatch on the Big Lost River. They are the most common serious fly fishermen. I've known these types to show prodigious technique, but how can you expect to catch real live fish on a fly?

If you've managed to get your thinking along "exact imitator" lines, you'll have to know something about "fly-fishing entomology", as the initiates call it. This is an informal version of what one knows about the life cycles and habits of the insects that fly into the kinds of bugs fish eat in different seasons and locales. The best book I've seen on the subject is John Goddard's Trout Fly Recognition. It's a book that is not only a good introduction to the world of English insects. Even so, a lot of the information is of use to fishermen on this side, especially as a good introduction to the world of insects that fly into the mouths of the fish. More than one author in this area intimates that many of the bugs British fly fish eat have near or exact counterparts on American streams. I have seen a few of the photographs of the insects he discusses—all of them large enough and detailed enough to serve as models for tying. A little field work would be enough to identify the insects. The book is of great relevance to this book for the streams you like to fly. Goddard also provides instructions on photographing live insects, and describes the anatomy of the insect wings—the hardest part of the fishing fly to reproduce well.

Several good books on insects common to American streams have been published, but they tend to go in and out of print rather quickly. Ernest G. Schweibert, Jr.'s *Matching the Hatch* is one source of treatise currently available. Schweibert describes common trout flies found both in the Eastern and Western parts of the country. This alone makes the book valuable, for most books tend to deal only with East coast streams. He provides classifications of flies according to the approximate season of their appearance, and includes four color plates of drawings of mayflies. The plates are good enough to reproduce flies from.

*The classics of American fly fishing entomology are Preston Jennings' A Book of Trout Flies and Art Flick's New Streamside Guide to Naturals and Their Imitation. The first is a handsome hard-cover volume, with copious and detailed illustrations of insects. It deals mainly with the East coast. My objection to the Flick book is its diminutive size, poor binding, and (relative to what you get) large price.*

*These books will only get you started, though. If you come to take this side of fly fishing seriously, you will have to do your own entomology, for another man's investigations of his favorite streams probably will not apply very exactly to yours. Goddard's book is by far the best model for your own field work.*

Pictures of bugs won't tell you how to imitations of them. If you are a beginner who needs instructions in the basics, I suggest the *Herter's manual* aforementioned (available, of course, from [www.bugbooks.com](http://www.bugbooks.com)). The *Herter's manual* is all you need and J. Edson Leonard's *Fliers*. *Herter's* gives you the basics, with George L. V. usual remarks about the impossibility of doing it any other way, plus a list of patterns. Leonard's book is more of a development of the *Herter's* patterns, and a more detailed design (you will be surprised how many sorts of eye, point, shank, and shape are to be found in the common fishhook), tools, and the detailed instructions for the patterns. The *Herter's* is a technique which you won't find in the *Herter's manual*. His dictionary of fly patterns runs some 80 pages and could keep you busy for decades. He also includes a 50-odd page chapter on the *Herter's* fly fishing technique introduction. If you want just one book on fly tying, this is it.

*I can't imagine anyone wanting more patterns than Leonard lists, but if you do, a series of books by Brütser W. H. Lawrie certainly should suffice. Most notable is his Reference Book of English Trout Flies, and his International Trout Flies (which includes some American patterns). Both are published in England, but should be available through Blackwells. The predominance of British bugs does not make them irrelevant, assuming you're given up becoming an amateur entomologist, because most of the standard patterns you find in the local tackle shop are of British origin anyway.*

Let's suppose you've done your field work on the native insects, become a master at tying techniques, and stocked up on as many of the standard patterns as you can use for the next three seasons. You're all ready to go out and catch a limit, but you don't know how to cast a fly. Well, there's a book for this too. Indeed, a legion of books. The first is *Angling for Trout* by the venerable Theodore Angler's Catalog, by Capt. T.L. Edwards and E. Horsfall Turner. This book has more information on every kind of fishing rod casting — bait, spinning, ocean, etc., as well as fly casting — than you can read in a lifetime. It also contains a chapter on the *theory of rod action* to the kind of tackle you ought to buy. The account of fly casting is detailed and pleasantly undogmatic — you needn't conform to any ideal casting patterns in order to catch fish. If you have pictures and diagrams show you how to do what the text tells you.

I'm a nut on survival and this spinning reel gadget is a beauty. Called a handline spinning reel it's a hard plastic, 6" diameter like a wheel. You hold the thing with one hand, and larriest fashion, cast with the other. The line spins off the reel as on a regular open faced spinning reel, but since this handline reel is 6" in diameter compared to 2" or 3" of a fresh or salt water reel, the line spins off faster, with less fouling, and also the retrieve is much faster. Naturally there is a lot against handline fishing. No rod to play the fish and to make the punishment that the fish gets out. No direct line to the fish, so the fish must be stronger. But I'm talking now about a cheap trip to carry anywhere with you and one that will land all kinds of fish. I've had more fun with the thing than any rod and reel combination.

As you know spin fishing (where the fish line pays off the face of the spool instead of the reel) is a very old way of fishing. Even before the invention of the bottle or can, indians fished in the spin off style using a kind of wooden shuttle. People throughout the world spin fish off bottles and cans. In Mexico it's called the Dos Equies reel after that famous dark beer. In Australia they use handline spinning reels similar to this Boone Bait Co product in three sizes going from a five inch to a ten inch. I bought one of these in Trinidad as Trinidad imports from Australia. The Boone reel that I bought that year ago the Japanese dropped off such a reel in the West Indies. The Cubans then got onto the thing and it made its way through Key West and now to Winter Park.

I like to use 25 lb monofilament line on mine although you can use from 15 to 50 lb. Fill it up (25 lb test will take about 300 yards) to within a half inch of the flange, whirl the lure along side or around your head and cast. Retrieve smoothly or in short bumps.

I'm speaking now of lure fishing. With lead and bait of course you just let it lie in position until you feel the nibble-strike. As I say I'm hung up on survival but I'm also a purist about fishing. I never use bait, only lures, and only single hooked lures, perhaps a spoon or two, but I prefer jigs. Leadheaded jigs. My favorites are: 1. The Bill Upperman bucktails. 2. The chrome headed Japanese feather jigs.

Ten years ago off a beach just north of Puerto Vallarta I was casting a Japanese white feather jig off a "Dos Equis" reel and picking up a channel bass or two and snook. But it was hot and I had already drank the beer in order to use the reel and so I took to the sea, carrying my beer can reel and line and lure with me. Thus began the most pleasure I've ever had. I call it Swim Fishing. Now these days I take the Boone reel out with me, 25 lb test mainline, 10 lb bucket! (it's oz) on the end. Off the beaches in Santa Monica Bay I've caught halibut, skip jack tuna, small blue shark, leopard shark, bonito, mackerel, sand bass, calico bass, white sea bass. . . .

For bottom feeds I merely kick (using swim fins) along slowly and let the lure bounce off the bottom. For bonito, etc. I swim flat out, holding the reel in one hand and in this way giving the jig action with each stroke. When the water is clear and in the top beds of coral Durum or Laguna Beach I wear a float and a lead, and dive for the fish. I've been in a salad of kelp and into a school of calico and placed my yellow Uppermul right on the table of sand before them. Letting out line I kick to the surface. Then yoyo the lure. Wham, a strike.

I've caught great barracuda and mangrove snapper in the Bahamas, snook in Trinidad, Pompano in Cozumel and the Virgin Islands, and have been hooked by a 50-pounder and a 40-ton tuna, Jack in the Philippines, and once I fool hooked a two ton Manta Ray off Yelapa, Mexico.

The beauty with swim fishing is that you swim the water the boats can't work. You also work ten times the water that a surf fisherman can because you present your lure parallel to shore, fishing it all the way. One of my finest experiences swim fishing was when a surf was running off Ft Lauderdale, Florida. I had my lure out behind me, resting on the bottom. I held onto my Boone reel. Here comes a wave. I body surfed it in and on the way got a big strike. I rode the wave to shore and reeled in a three pound Jack Crevalle.

Available for \$2.00 plus shipping from Handline Spinning Reel,  
Boone Bait Co., Inc., Box 571, Forsyth Road, Winter Park, Fla  
32790

I've got another good gimmick for you. You ought to check it out. You can't buy it in retail stores, and I don't know why. I've never seen it for sale, always send to the source for mine. Over the past ten years I've had four of them and they are by far the best and cheapest barbu outfit on the market.

**OLD SMOKEY.** Looks like two galvanized tin pails sitting mouth on top of mouth. Hot smoke oven (better than that expensive but chic Japanese cooker) with two drafts for control (as good if not better than Weber and much cheaper).

I use ours for everything. No burn. No flare ups. If fat on meat does flare, just close drafts somewhat. I cook whole turkeys and chickens. Set them on lemon slices in foil boat and on grill and pop on cover and leave. No turning. Baste some. No spits needed. Sometimes I use wet smoke chips. Fabulous for salmon which I have cooked whole or in steaks. I've got both size Smokey's but use the No. 14 (14 inch diameter) more often.

OLD SMOKEY, Burkhead Mfg Co, 1920 Harrington, PO Box 4, Houston, Texas 77001  
No. 14 is \$9.95, No. 18 is \$14.95. No shipping charges.

Ben Masselink  
Pacific Palisades, CA

### Spear Fishing

**Speart Fishing**

For \$125 I have been feeding our entire community of 6 adults and four children. \$125 will buy you an entire sport fishing outfit at Steeles (Telegraph, Oakland). For veget-

flour, dope and whiskey I trade my surplus. To learn, find somebody who is an expert diver and apprentice yourself available for advice.

Source for fly tying tools and supplies: *Herter's Inc., Waseca,*

Minnesota.

*Books mentioned in the review:*  
Goddard, Trout Fly Recognition, pub. A & C Black, London, 1966.

Leonard, Flies, A.S. Barnes & Co., New York, 1950, hardcover.

Edwards & Turner, *The Angler's Cast*, pub. Jenkins, London, 1960.

*hard cover, available from Blackwells.*

Schweibert, *Matching the Hatch*, Macmillan Co., N.Y., 1955,

*Flick*, New Streamside Guide to Naturals and Their Imitation,  
Crown Publishers, hardcover.

Lawrie, W.H., Reference Book of English Trout Flies, pub. Felham Books (British), 1967

Lawrie, W.H., International Trout Flies.

Alan Graham  
Caspar, CA

I remember my dad's Orvis fly rod. Beautiful, flawless with no effort (when he'd let me use it). Bamboo plus engineering craftsmanship puts anything else to shame as far as flyrods go. Orvis also offers a good line of trout, salmon & bass fishing gear some moderately some extensively priced.

(Reviewed by Mike Goslow)  
Suggested by R. Davis

Plus very nifty and very expensive outdoor stuff.

—SB

## Catalog

free

from:  
The Orvis Co., Inc.  
Manchester, Vermont 05254

## Nctract

Swivels, sinkers, spinner blades, bodies & hooks for making your own lures, some good prices on rods & reels. Equipment for most fresh water fishing. Fantastic offering of plastic worms.

(Reviewed by Mike Goslow)

## Catalog

free

from:  
Nctract Fishing Tackle  
3101 Sylvania  
Toledo, Ohio 43613



FLOATING TROUT NET — \$1.95

## NEW GLO-WORMS . . . GLOW IN THE DARK!

HOTTEST thing since plastic worms first came out. Radiates a luminous ghostly glow FROM ITS OWN STORED UP ENERGY. Glows night and day. Quick to catch. Deep flash in a terrific little flash can see 'em and do they only get strikes. See for yourself. FOUR NEW COLORS: GLO-BLUE, GLO-RED, GLO-YELLOW, GLO-GREEN.

No. 28-83X3 Glo-Worm rigged, state color . . . \$1.79

No. 28-78X3 Glo-Worm pkg. of 3 unriggered, state color . . . \$1.65

## South Bend Finalist \$4.25

No. 112Z—Single Action quality fly reel—much in demand. Quick to catch. Deep flash in a terrific little flash can see 'em and do they only get strikes. See for yourself. FOUR NEW COLORS: GLO-BLUE, GLO-RED, GLO-YELLOW, GLO-GREEN. Holds 50 yds. of D line. Regular \$4.95 . . . \$4.25



## DOC SHELTON

## LAKE TROLL SET \$1.35

CONTAINS one of each of 8 sizes of Doc Shelton famous Lake Troll blades to make this famous or linked chain type of troller. Blade size step up from 1" to 3". Includes rubber, straightened wire links, clevises, and 1/4" and 1/2" leads. Directions.

No. 48-284A Professional Vise \$7.98

No. 300 Above . . . \$4.25

Regular \$4.95 . . . \$4.25

4A-1R18 Doc Shelton . . . \$1.35

4A-1R18 Doc Shelton . . . \$1.35

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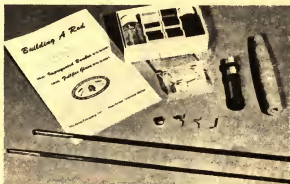
4A-1R18 Doc Shelton . . . \$1.35

4A-1R18 Doc Shelton . . . \$1.35

## Chase Fly Tyer's Bobbin

This one is cheerful red plastic. Keeps tension on the spool. A loose spool can slip away awfully suddenly.

T1436—(Min.) . . . \$3.25



## Madison Bamboo Fly Rod Kit

Madison Kit complete, including poplin sack and aluminum rod case (4 lbs.) . . . \$63.50  
Extra Tip Section, ferrule & tip top mounted (4 lbs.) . . . \$27.50

## Cabela's

Another catalog worth looking at, for outdoor as well as fishing equipment.

—SB

Cabela's Inc.  
812 13th Ave.  
Sidney, Nebraska 68162

## Basic Fly Tying

If it's not too late, I am sending a copy of a "book" that I produced which has had good acceptance while I was selling it through Amercom & Tackle in San Francisco. This was a couple of years ago and they no longer have the claim to exclusive distribution.

I would like to offer my humble work, which is in its original state (this is a series of pen & ink sketches on parchment. If your people and readers are interested I will be glad to mail them a copy for whatever they consider rightness.

This is a fascinating hobby and I have devoted many years to perfecting my techniques. I also want to share this with others. Thank you.

Dick B. Miller Jr.  
674 Jackson Street E.  
Minnetonka, Oregon 97361

It's a good little book. Send him some money with your request.

—SB

## Fish Catalogs

I list below some sources I have not seen in your catalogues, although you may know of them. The items are all in the area of fish-catching, tying flies etc. I recommend them all highly.

Reed Tackle  
Box 350  
Caldwell, New Jersey 07006 (catalogue available)

Tully's (fly tying methods & materials)  
Box 176  
Bellefont, Illinois 60104 (catalogue available)

If you need fluorescent mallard plumage, chenille feathers, rooster hackles, Amerist pheasant tips or thank tulle your quest is over)

E. Hill, the anglers supply house  
815 Railway Street  
Williamsport, Pa. 17701 (catalogue available)

(this outfit is the quintessence of every piscatorial's hidden—although not without guile—desires. They start with Dubby Arns tail quills, continue through Balsa feathers and varnish even the most professedly liberal with their Jungle hook plumes. From their catalogue "As an added attraction to fish, eyed jungle hook feathers are extremely used in stream and using pads of nymphs." E. Hill's also carries all the items to make the complete fishermen look like he knows what he is doing.)

Ross M. Lord Miller  
Oremos, Michigan

## Introduction to Caving

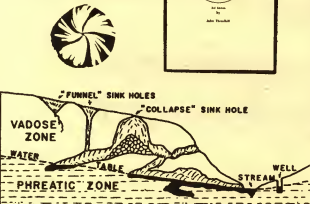
Make your heroic journey to the underworld. Return to tell about it. This intro has an annotated bibliography if you get to liking that kind of adventure.

—SB

Introduction to Caving  
John Thraikill  
1962, 30 pp.

\$1.00 postpaid

from:  
Alpine Ridge  
Box 54  
Mount Vernon, N. Y. 10562



It is quite an experience to visit a cave that is heavily decorated with speleothems, and it is quite a temptation to remove just one or two small ones as mementos of the trip. Surely, you think with all these stalactites no one will ever miss just one or two. Obviously you are right, no one will ever miss just one or two. But after a hundred people have removed just one or two, the loss of one or two hundred is all too apparent. Something beautiful has been destroyed. Utterly destroyed, for it will take many lifetimes for even the smallest stalactites to be replaced.

Falling rocks are one of the greatest hazards of spelunking. For this reason, hard hats should always be worn in caves where there is any climbing to be done. A falling pebble can be a murderous weapon, and extreme care should be taken to avoid dislodging loose rocks if there are people below. It is obvious that boulder pits should be treated gently, since they are often precariously stacked and a slide could prove disastrous to persons on and below them.

## Thompson Professional Fly Tyers Vise

—Quick action, cam-type lock holds lures securely without damage. Deer hair tyers will appreciate this extra firmness. Full rotating jaw adjustable. Heavy.

No. 48-284A Professional Vise \$7.98

No. 300 Above . . . \$4.25

Regular \$4.95 . . . \$4.25

4A-1R18 Doc Shelton . . . \$1.35

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4A-1R18 Doc Shelton . . . \$1.35



## Pole, Paddle & Portage

This is the authoritative book on canoes and canoe tripping. I paddled northern Wisconsin lakes and rivers for six summers without learning a fraction of the useful information here.

—SB

### Pole, Paddle & Portage

Bill Riviere  
1969, 255 pp.

\$6.95 postpaid

from:  
Van Nostrand Reinhold  
450 West 33rd Street  
New York, N.Y. 10001

or WHOLE EARTH CATALOG

### Pole, Paddle & Portage

A Complete Guide to Canoeing  
By Bill Riviere

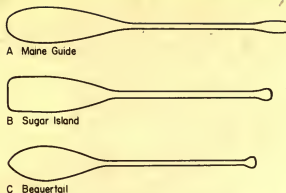


Figure 18 (A) Maine Guide blade; (B) Sugar Island blade; (C) Beavertail blade.



Because the flat surface of the paddle blades rest on the shoulders, this type of yoke is one of the most comfortable. Photo by Eleanor Riviere.

One of the most frequent questions is, "How big a canoe shall I buy?" There is only one answer... the biggest one you can lift gracefully.

Dozens of uses are found for the rope: tying gear into the canoe, guying the tent against a stiff blow, rigging a clothes line, lining the craft through turbulent pitch, hanging food supplies out of reach of hungry critters, tying packs for portaging and emergency towing—to name only a few.

The Yukon's canoe routes are long and remote. With the reduction of commercial river traffic—most of this now going over the highways—the rivers are once more deserted. Waters in the Yukon average about 50 degrees even during a hot summer; lakes may not be ice-free until the middle of June and freezing temperatures and snow can be expected by the first of September. The rivers are large, supply points are few and far between. A canoe cruise should, therefore, include at least two, preferably three crafts. Early September sees grizzlies feeding on salmon in the shallows so that the Department of Travel suggests that a rifle be carried during this period, to be used only in emergency.

There are compensations for the difficulties, though. From Whitehorse to Dawson City, via the Yukon River, there are no portages during the 450-mile run and the river gradient is only 1 foot per mile. Since this is a former route of the majestic sternwheel steamers, there is available a published log of the river between Whitehorse and the Tanana River (see Appendix).

## Bark Canoes and Skin Boats

Design and construction details for all native American boats. Complete.

—SB

The Bark Canoes and Skin Boats of North America  
Edwin Tappan Adney and Howard I. Chappelle  
Smithsonian Institution, USNM Bulletin No. 230

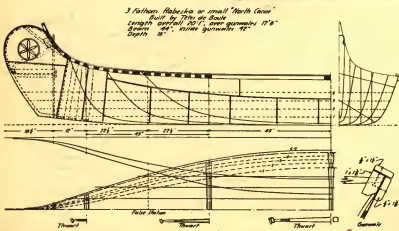
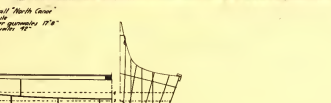
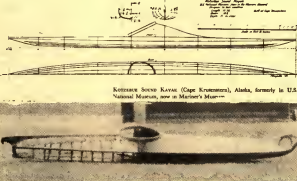
\$3.75 postpaid

from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

or WHOLE EARTH CATALOG



Fig. 6—When running rapids solo it is advisable to take a position at or near amidships as shown. This permits shallowest draft, maximum maneuverability, and maximum rise and fall of the ends of the canoe as the waves work on it. The latter is important in keeping out water when waves are large.



282 Canoeing  
Nomadics

## Canoeing

The American Red Cross has instructions on how to make a birchbark canoe. No wonder they got into teaching lifesaving. The book has one hell of a lot of canoe information for \$1.25.

—SB

Canoeing  
American National Red Cross  
1956, 445 pp.

\$1.75 postpaid

from:  
Doubleday & Co., Inc.  
501 Franklin Ave.  
Garden City, L.I., N.Y. 11530

or WHOLE EARTH CATALOG

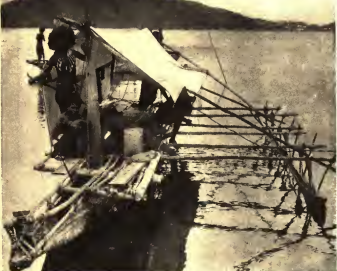
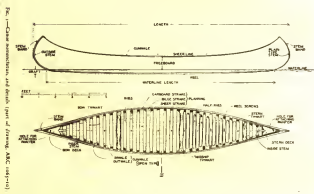


Fig. 8—Outrigger dugout of the Papuans of New Guinea represents types found among many islands of the Pacific Ocean. The cloth canopy protects from the hot tropical sun. The platform is built on a very narrow hull and the outrigger provides stability. (Photograph by Ewing Galloway, New York)

## A White Water Handbook for Canoe and Kayak

That's what it is.

White Water Handbook  
for Canoe and Kayak  
John T. Urban  
1969, 76 pp.

\$1.50 postpaid

from:  
Appalachian Mountain Club  
5 Joy Street  
Boston, Mass. 02108



**Ekmo roll.** Apart from the direct satisfaction that it brings, mastering the roll has some specific and important benefits. Since you can cheerfully court an upset when practicing braiding strokes and crossing currents, your practice and subsequent style will not be cramped through fear of capsizing; your ability to use the paddle for balance in rough water will be much enhanced; and finally, you will be able to recover from at least some upsets on the river.

Rolling is not the rare feat it was once thought to be. In a well-designed kayak little strength is required for a properly executed roll, and some experts can roll without a paddle using two hands alone, and in some cases, only one hand.

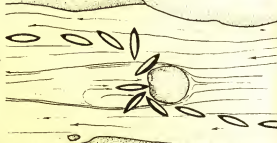


Fig. 14.  
An eddy turn below a midstream boulder, followed by a turn downstream into the current on the opposite side.



Birchbark canoes, good price

For a long time, friends have recommended that I write to you about getting a listing in your catalog. I have been building, for several years now, Indian birchbark canoes. These canoes are entirely handmade of natural materials which I collect in the woods, the same as Indian builders. The bark is from the paper birch, and the woodwork is split and worked of white cedar. The sewing is done with split pine roots and the sealing of the seams with pine pitch. All of my work is done with handtools, basically the froe, drawknife, spokeshave, and plane.

I have built canoes of several different tribes. The two in the picture I sent are an Abnaki canoe on the left, and a Malécite canoe.

I would like to sell my canoes for about \$400, as it takes over a month's work to build one. My friends and myself have used my canoes on trips to Maine, and they stand rough usage remarkably well.

I also make hand carved Indian paddles which I sell for about \$25. In making canoes and paddles, I would like to say that I can make these things to order if desired; the buyer can design for himself the canoe or paddle.

Sincerely  
Henri Vallancourt  
Mill St. Box 199  
Greenville, N.H. 03048

## Old Town

A famous reliable traditional canoe-maker with a sporty line these days. Wood and fiberglass. Canoes and kayaks.

—SB

Catalog  
free

Old Town Canoe Company  
Old Town, Maine 04468



Scuba diving from a 16' F.G. Canoe \$330

## ChicagoLand Canoe Base

A good line of canoes, including Canadian fiberglass, Max Anderson mahogany, and accessories.

—SB

[Suggested by Ralph C. Dougherty]

ChicagoLand Canoe Base  
4019 N. Narragansett Ave.  
Chicago, Ill. 60634

## Grumman Canoes

Generally considered the best aluminum canoe on the market. Costs about \$50-\$75 more than other makes but workmanship is far superior. It's well worth the price if you intend to use the boat heavily. Very durable! I got mine at a discount after it had been blown down a wooded hill during a tornado and it was fine after I pounded out the dents. Can be equipped with a sail which you can buy complete at considerable expense or buy the basic parts and make the rest yourself. Catalog also lists rowboats and sailboats, with which I've had no experience. Grumman sends along a complete list of franchised dealers in your states; it's wise to check with several before buying as reductions from the list price are not uncommon.

[Reviewed by Phil Schrodt]

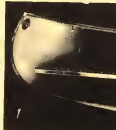
Grumman Boats  
Grumman Allied Industries, Inc.  
General Sales Office  
Marathon, N.Y. 13803



**GRUMMAN CARRYING YOKE**—Clamps to gunwales over center thwart. Two cushioned pads, scientifically spaced and positioned to rest easily on shoulders, make portaging light and comfortable. Catalog #905



**SPRAY RAIL** All Grumman square-stem canoe models and the Sportcanoe™ are equipped with scientifically designed spray rails for direct operation with outboards or sailing. All Grumman spray rails are full-length!



**CANOE KEEL** Heavy extrusion, heat-treated, full-length keel and keelson sandwich type construction. Neoprene seal with close-spaced rivets on ¼" centers. Built-in clips for mast step and floorboards. Easy installation of accessories and positive watertight seal.



## Quicksilver Canoe & Kayak Kits

Build it all winter. Put it in the stream when the ice breaks up. Paddle to the sea.

—SB

Quicksilver Canoes  
115 McCavock Pike  
Nashville, Tenn. 37214



KAYAK-OTTER KIT  
Absolutely Complete \$70

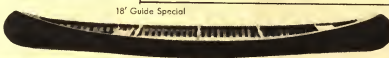


Kit: \$80

KAYAK-OTTER CANADIAN



KAYAK-OTTER SPORTS SINGLE  
A 33 pound beauty.



18' Guide Special

**Specifications: Guide Special Model Canoe.** Wood-canvas construction. Available with reinforced plastic in place of canvas — \$40.00 extra, about same weight. Stock color: Dark Green.

Length	Width	Height	Bow	Depth	Wt.	Packed Wt.	Price
16'	35"	20 1/2"	12"	70 lbs.	100 lbs.	\$495.00	
18'	37"	23"	12"	85 lbs.	110 lbs.	\$525.00	
20'	39"	23 1/2"	13 1/4"	100 lbs.	135 lbs.	\$565.00	



Price  
\$195.00



## THE SAND ROOM

He is in the well, inching down, supported by his back and feet pressing into opposite walls. His legs are aching terribly, sharp protrusions gouge deep furrows in his back, but there is no way he can reverse and climb back out again. He can't stop himself from slipping down. Every time he presses hard enough to stabilize his thighs swell with cramps and make him shift his feet around, which drop him down another inch or two. Once when he released a foot to shift he lost all control and fell scraping several feet before he caught himself again. Down. Sliding down, lowering through the tight, round passageway, pain all through his legs and back, inch by inch along the jagged walls behind him... disappear... falling falling free through empty air!

(continued)



Canoes  
Nomadics

283



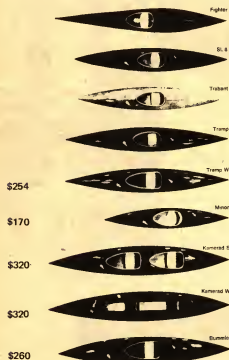
## Klepper

Klepper is the best of the folding boats and kayaks.  
—SB

[Suggested by Dee Scarnon]

## Catalog free

from:  
Hans Klepper Corp.  
35 Union Square West  
New York, N.Y. 10003



## Texas Dory

Texas Dory Boat Plans Catalogue, by Capt. Jim Orrell.  
\$2.00, I think, from Texas Dory Boat Plans, Box 720,  
Galveston, Texas 77550

A catalogue with illustrations and line drawings of plans for boats 15 to 45 feet, sail, outboard or inboard. Plans cost \$10 to \$15 but by careful drafting you could make your own from the line drawings.

By following one of these plans even you and I can build a strong, seaworthy boat of plywood for less than it should cost to power it. These designs are mostly modifications of the traditional dory workboat. The angular shapes make for relatively easy boatbuilding. You need a skill saw, mitre box, a copy of Stewart's *Small Boat Construction*, a whole mess of clamps and a place to do it. I used my living room.

Tom Tarr  
North Vancouver, B.C.  
CANADA

## Cheaper Inflatables

A suggestion. Avon makes the best inflatable rubber boats (see page 114, Spring 1970) but they are way overpriced. Recommend best buy for the money are WFR rafts (price: 4 man \$60, 6 man \$80). Good solid construction—neoprene coated canvas as opposed to the rubber coated nylon (marketed by Sears and Wards) which is less rigid, more susceptible to tears and slippery when wet. WFR rafts are available from: Lee's Outdoor Stores, 37 West St., Annapolis, Md 21401 (phone 301-269-0600). Rafts don't have an inflatable internal cross member, but if added support is needed for white water work, a medium large inner tube works fine (on your lunch break, take the inner tube out of the boat, walk up stream and float by your friends in grand style).

A recommendation for anyone that lives between Albany and Washington: the Youghiogheny River. One of the best stretches of white water on the East Coast. Start at Ohioville, Pa (20 miles east of Uniontown on U.S. 40, then 10 miles north on pa. No. 381) and get about 10 miles of great river. (Ask anyone in Ohioville where "they take the rafts out" and you'll get directions where to leave your second car downstream.)

For the less-than-experienced, Lance and Lee Marin take groups (or individuals) down the same stretch. For about \$10 a head, you get a raft, a good lunch, expert guides, and real use. Even for the experienced, not a bad idea just to learn the river. Call Wilderness Voyagers, 412-329-4752 (Lance's mother-in-law usually answers the phone.)

Warmest Regards,  
David Abramson  
Harwood, Maryland



"Blauwau" \$348

## British Seagull

The Seagull outboard is designed to give power rather than speed. We've used it on our 23' Ketch for both harbors and long distance and it's equally good at both. The operating manual says, "The Seagull is a pure-bred marine engine, for a hard life on saltwater... a plain, functional motor with an exceptional performance, & unlimited life requiring the simplest of maintenance at the lowest possible cost." We're being rapidly convinced that the Seagull is one thing that actually gives you what you pay for plus a little more.

[Suggested and reviewed by  
Judith Sawyer]

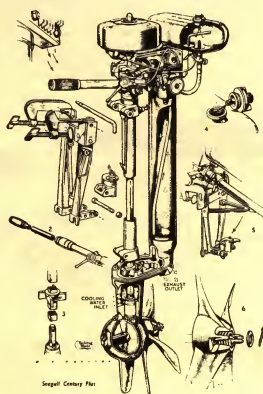
2 h.p. "featherweight" \$158  
3 h.p. "forty plus" \$170  
5 h.p. "silver century" \$230  
6 h.p. "silver century plus" \$265

British Seagull Co., Ltd.  
Poole, Dorset  
England

and various U.S. Distributors such as:

Inland Marine Co.  
79 E. Jackson St.  
Wilkes-Barre, Pa. 18701

The Boat Locker  
1375 E. State St.  
Westport, Conn. 06880



Seagull Century Plus

## Avon

Avon is the best of the inflatable boats. Also an excellent liferaft kit.

—SB  
[Suggested by Vaughn Greene]

## Catalog free

from:  
Seagull Marine Sales  
3107 Washington Boulevard  
Venice, CA 90291

Inland Marine Co.  
79 East Jackson Street  
Wilkes-Barre, PA 18701

The Intra Corp.  
151 Mystic Avenue  
Medford, Mass. 02155



\$345



## Pirelli Inflatables

Another high-rent inflatable. Italiano gorgeous.

—SB  
[Suggested by Brooks Tenney]

Centro Pirelli  
20100 Milano  
Italy

LAROS 30°



\$500

## Water Charts

If you're travelling on the water, you're going to need something more than an auto road map to tell you where you go. For United States waters the best charts (the only ones, really). All the others say something like "refer to the appropriate C & GS chart for navigation data" are the ones issued by various government agencies.

Where to get the charts depends upon where you want to go. Charts of the Atlantic, Pacific, and Gulf Coasts, and the Intra-coastal Waterway come from the Coast and Geodetic Survey. The Mississippi River and its tributaries are on Army Corps of Engineers charts, and the Great Lakes are handled by the Lake Survey.

Cost of individual charts varies, most run about a dollar or two, except for the rivers, which come in books. The Missouri River, for instance, comes in two parts and costs \$2.00 a book.

Index maps for the lakes and coasts are free from the appropriate agency. It's easier for the rivers—you tell the Corps which river you want, and they sell you the whole book.

Charts are frequently revised, and you should be using a current one, because the changes can sometimes be big ones. Catalogs are available free from:

Director, Coast & Geodetic Survey  
E. S. S. A. Washington Science Center  
Rockville, Maryland 20852

Lake Survey District, Corps of Engineers  
630 Federal Building and U. S. Court House  
Detroit, Michigan 48226

There's no central source for river charts. Appended list is where each can be gotten.

Nautical charts of foreign countries are issued by the U. S. Naval Hydrographic Office, Washington, D. C. 20380. Write to them about a catalog.

John M. Ross  
St. Louis, Mo.

### Upper Mississippi River

District Engineer  
U. S. Army Engr. Dist., St. Paul  
1217 U. S. P. O. & Customhouse  
St. Paul, Minnesota 55101

District Engineer  
U. S. Army Engr. Dist., Rock Island  
Clock Tower Building  
Rock Island, Illinois 61202

District Engineer  
U. S. Army Engr. Dist., St. Louis  
906 Olive Street  
St. Louis, Missouri 63101

### Lower Mississippi River

District Engineer  
U. S. Army Engr. Dist., Memphis  
668 Federal Office Building  
Memphis, Tennessee 38103

District Engineer  
U. S. Army Engr. Dist., Vicksburg  
P. O. Box 60  
Vicksburg, Mississippi 39180

District Engineer  
U. S. Army Engr. Dist., New Orleans  
Foot of Prytania Street  
New Orleans, Louisiana

### Illinois Waterway

District Engineer  
U. S. Army Engr. Dist., Chicago  
218 South Dearborn Street  
Chicago, Illinois 60604

District Engineer  
U. S. Army Engr. Dist., St. Louis  
906 Olive Street  
St. Louis, Missouri 63101

### Missouri River

District Engineer  
U. S. Army Engr. Dist., Omaha  
6012 U. S. P. O. & Court House  
Omaha, Nebraska 68102

District Engineer  
U. S. Army Engr. Dist., Kansas City  
1800 Federal Office Building  
Kansas City, Missouri 64106

### Kanawha River

District Engineer  
U. S. Army Engr. Dist., Huntington  
502 8th Street  
Huntington, West Virginia 25721

### Ohio River

District Engineer  
U. S. Army Engr. Dist., Pittsburgh  
1000 Liberty Avenue  
Pittsburgh, Pennsylvania

District Engineer  
U. S. Army Engr. Dist., Huntington  
602 8th Street  
Huntington, West Virginia 25721

District Engineer  
U. S. Army Engr. Dist., Louisville  
830 West Broadway  
Louisville, Kentucky 40201

### Green River

District Engineer  
U. S. Army Engr. Dist., Louisville  
830 West Broadway  
Louisville, Kentucky 40201

### Allegheny & Monongahela Rivers

District Engineer  
U. S. Army Engr. Dist., Pittsburgh  
Federal Building  
1000 Liberty Avenue  
Pittsburgh, Pennsylvania 15222

District Engineer  
U. S. Army Engr. Dist., Nashville  
P. O. Box 1070  
Nashville, Tennessee 37202

### Tennessee, Cumberland, Little, Clinch, Emory & Hiwassee Rivers

District Engineer  
U. S. Army Engr. Dist., Nashville  
P. O. Box 1070  
Nashville, Tennessee 37202

### Other

District Engineer  
U. S. Army Engr. Dist., Little Rock  
P. O. Box 86  
Little Rock, Arkansas 72203

District Engineer  
U. S. Army Engr. Dist., Garrison  
Administrative Building  
Riversdale, North Dakota

District Engineer  
U. S. Army Engr. Dist., Tulsa  
P. O. Box 61  
Tulsa, Oklahoma

District Engineer  
U. S. Army Engr. Dist., Mobile  
2301 Airport Boulevard  
P. O. Box 1169  
Mobile, Alabama 36601

Tennessee Valley Authority  
Knoxville, Tennessee

[These last are sources for reservoirs, man-made lakes and such. There's probably some other office for lakes in the Colorado. Check with your local office of the Corps of Engineers]



\$200  
matter, aver,  
\$1400+ ferro  
cement

Samson Marine Design Enterprises Ltd.  
833 River Road  
Richmond, B.C. Canada

## Boston Whalers

Jay Baldwin says these Boston Whalers are known as the best of the new small utility outboards. \$595-\$2405. Suitable for ocean use.

—SB



from:  
The Fisher-Pierce Co., Inc.  
1149 Hingham Street  
Rockland, Mass. 02370

## House Boating

If you're shopping for houseboats this magazine will help. Houseboats are pretty nice to live on. I lived on a grounded barge with a board & batten cabin on it in Susalito till the feds chased me out. Probably these aluminum and fiberglass joes don't have that problem. I bet they have others. A home to fuss with, where weather and tide concerns you, that's houseboating. Live like in a movie.

—SB

Family Houseboating  
Art House, ed.

\$4 /yr (bimonthly)

from:  
Family Houseboating  
P.O. Box 2081  
Toluc Lake, California 91002

### Pontoons

We're planning on having a houseboat built, and would like to know what kind of material is best for the pontoons... fiber glass, aluminum, or steel? At the present time, we're thinking of fiber glass, built with seven bulkheads.

Billy V. Gibson  
Whittier, California 90604

Each material has its own pros and cons, but if it were our boat we'd go with marine aluminum.

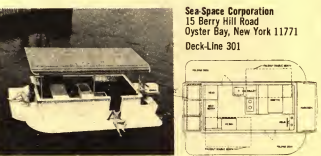


Land N' Sea Craft, Inc.  
1813 South Tenth Street  
San Jose, California 95112

### Land N' Sea



\$10,950



\$4490

## HOUSEBOAT KITS

Luger Industries, Inc.  
1300 East Cliff Road  
Burnsville, Minnesota 55378

Glen L. Marine Designs  
9152 Rosencrans  
Bellflower, California 90706

## The Old Boathouse

let me recommend the old-fashioned wooden rowing & sailing dinghies sold by "The Old Boathouse", 2770 Westlake No. Seattle, 98109, as beautiful & seaworthy craft.

The Norwegian "rana" boats range in size from 9'4" to 16'8". They are cap-stake, copper riveted & oak framed. They are light, yet very strongly built. The 16'8" sloop is an open dinghy with a full-length skeg as well as daggerboard. This gives a directional stability lacking in fiberglass racing boats. A rana boat will beat or reach all day without a touch of the helm. She can carry as many as 6 adults comfortably & still not be overloaded. She is a great, safe family boat that sails well in all conditions & rows quite well. (Oars come with the boat.) The rana boats are a real bargain, costing far less than anything comparable in fiberglass.

"The Old Boathouse" also sells a traditional, fine lined, cap-stake rowing skiff on the lines of the famous "whitehall" skiffs. This boat is built in Minnesota & is a wonderful example of a dying art. These boats are undoubtedly one of the most easily rowed boats in the world. The construction is white cedar plank, oak frame, & copper clench nailed throughout. The boats are beautifully finished in varnish inside & out. The prices for this boat are quite high, but the craftsmanship is the highest quality.

[Suggested & Reviewed by Robert Perry]

## The Old Boathouse—Information

free

from:  
The Old Boathouse  
2770 Westlake North  
Seattle, Washington 98109



\$2495



Beyer Manufacturing Co.  
2978 So. Cherry Avenue  
Fresno, Calif.



Unifite, Inc.  
P.O. Box 1095  
Sellingham, Wash. 98225  
Yacht Home

\$24,795  
\$24,495



D.R. was falling but because he couldn't see that he was falling he was one of sudden weightlessness, of sudden freedom from the limits of the well, from pain from cramp from gouge in his torn back from crawl and slide from run from try to make his body pull beyond its power. Free, D.R. flew into a black he couldn't see before he landed hard enough in dry loose sand to take his wind away. Windless he felt more euphoric than hurt or terrified. He landed on his back and empty as it felt throughout the lower reaches of his lungs it was peaceful lying in the black, and he just lay there. Lying, resting. His body rested in the sand so deeply it had no wish to move even when his lungs had filled and breathed again. Except to stretch. There was rest. The longest, deepest rest upon the blackness of the sand and then a stretch, a reaching of the sinews, utter luxury of move yawn and stretch and feel it tingle on the spine until the yawn and yawn and yawn from the very bottom of his spine.

(continued)

Boats  
Nomadics

285



## Skin and Scuba Diving

Don't expect to read this book and start scuba diving in a month or so. Scuba diving is fun and rewarding sport. But without proper training, it is very dangerous.

This book has grown in time along with the sport of scuba diving. Now in its newest edition, it is more complete than any other book ever written on this subject by anyone. So if you're interested or planning to be involved in this art, you would be best to buy this book; if you don't get it now, your instructor will tell you to later.

[Reviewed by Jay Bonner.  
Suggested by Jack O'Neill]

The New Science of Skin and Scuba Diving  
1967... 1988, 224 pp.

\$2.95 postpaid

from:  
Association Press  
291 Broadway  
New York, N. Y. 10007  
or WHOLE EARTH CATALOG



## Underwater Work

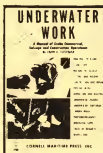
If you're near the water, there's all manner of work to be done under it, and a well-paid shortage of men with the skills.

—SB

Underwater Work  
John E. Cayford  
1966; 286 pp.  
\$6.00 postpaid

from:  
Cornell Maritime Press, Inc.  
Cambridge, Maryland 21613  
or WHOLE EARTH CATALOG

Hours	Pay Scale (Master Scuba Diver)
0-8	\$ 22.50 per hour
8-12	45.00 "
12-16	100.00 "
16-20	250.00 "
20-24	500.00 "
Over 24	1000.00 "



## Surfer

A very well produced magazine, well ahead of its imitators, and miles ahead of most other sport/hobby magazines. Has anybody ridden clean up and around inside a curl, vertical 360, and come out standing?

—SB

Surfer  
John Severson, ed.  
\$5 /yr (bimonthly) \$5.50 foreign

from:  
Surfer Magazine  
Box 1028  
Dana Point, CA 92629



How much planning do you do before you start into a ride?

I hardly ever organize what I'm gonna do on a wave. The only thing I do organize is probably my first turn. After that I flow with the wave, and if an opportunity comes up to try something, I do it. It's just a matter of getting onto the wave and going and seeing what happens. I like to get into the rhythm of the wave and see what comes out of it.

What do waves represent for you?

Well, they're definitely not football fields, though there are athletes in the sport who look at them that way. But then there are the other people that aren't looking at it as a sport at all. They sort of see it as an art form. To me it's a lot like dancing. I get the same feeling from moving to music as I do with moving on a wave. As a matter of fact, I went dancing last night.

You are often associated with "power surfing," but is that really your thing?

I don't try to be powerful. To me, to be powerful is to overwork the board and the waves. I don't think of myself as a power surfer, because it's the wave that's got me in its power. Like with skiing, the speed comes from the hill. The skier just tries to maintain.

Barry Kanaiaspuni



## U.S. Navy Diving Manual

the navy probably knows more about water things than any other institution on earth, mainly, sadly, because they have been making war on the oceans for longer than you and I can remember. this is the manual they use to train their divers. good introductory stuff about pressure, buoyancy, anatomy, safety principles, and heavy portions of deepdiving techniques. the gear illustrated is generally navy issue equipment, but it is easy enough to make the connection between government and private manufacturing.

—jd

U.S. Navy Diving Manual  
March 1970; 687pp.

\$2.25 postpaid

from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20201

or WHOLE EARTH CATALOG



The buoyant effect of liquids is expressed by Archimedes' principle. This states that any object wholly or partially immersed in a liquid is buoyed up by a force equal to the weight of the liquid displaced. Figure 1-17 illustrates the following example: A diver, with his helmet and dress, weighs 384 pounds. If he inflates his dress so that he displaces 6.5 cubic feet of water, we will be buoyed up by a force equal to the weight of 6.5 cubic feet of water. Because sea water weighs 64 pounds per cubic foot (1.24 (10), the buoyant force acting on this diver would be 6.5-64=416 pounds. This force is 32 (416-384) pounds more than his total weight. Such an excess of buoyant force is called positive buoyancy.

Diving without breathing apparatus requires breath holding, and methods of prolonging the length of time the breath can be held are always of interest to skindivers and the like. The discomfort which forces a man to resume breathing arises largely from the two main mechanisms concerned with the control of breathing. Rising carbon dioxide tension directly stimulates the respiratory center, while falling oxygen tension stimulates it via the chemoreceptors. As the degree of stimulation increases, it becomes more and more difficult to restrain the urge to breathe; and at some point, the individual will break and resume breathing.

## Surfboard Builder's Yearbook

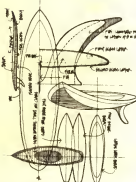
You can't build surf when you want it. But you can build a surfboard while you're waiting.

—SB

Surfboard Builder's Yearbook  
Michael Morgan, ed.  
1963-1971; 64 pp.

\$4.00 postpaid

from:  
Transmedia  
9811 Edgeland Rd.  
La Mesa, CA 92041



## New England Divers

Skin diving (with mask, snorkel, fins, etc.) and/or scuba diving (with tanks of air) are healthy recreation which allow one to see and enter a completely different world where he is surrounded by a different medium (water) and different flora and fauna from those which he has experienced in his lifetime.

I have found the best place to buy equipment on the east coast, and I think the west coast. It is New England Divers Inc., Beverly, Mass. They are the distributors of diving equipment to the eastern sports shops and will sell to individuals, in small or large quantity, all brands of diving equipment at the same price that they sell it to the sports shops. They sell over their counter, by mail, or by phone (one can call collect from anywhere in the continental U.S. for an order over \$50.).

The "salesmen" in the store are all extremely experienced professional divers. They have given me knowledgeable and honest advice with their low prices. Last spring I was preparing to go to Turkey on a deep diving underwater archeological expedition sponsored by the National Geographic Society.

When I went to their shop to discuss some personal equipment purchases with them I found they already knew about the expedition and what kind of work I'd be doing. They brought up and discussed with me the pro's and con's of various equipment, convincing me not to buy some items and to buy some others. When I was in Turkey this summer, isolated from any diving shop, I found they had been right in every detail.

One of the things I bought was a U.S. Divers Calypso "J" regulator which can be purchased in any sports shop at \$110. These people sell it for \$73.70, brand new, with guarantee (this is one of the most expensive but also the most reliable regulator).

(Reviewed by Warren Riess)

### Price List

free

from:  
New England Divers Inc.  
42 West Street  
Beverly, Mass. 01915



## U.S. Divers

U.S. Divers—for scuba is the only co. I would recommend. In 8 years of scuba diving I have used their gear time and again and find it to be reliable and durable. Their regulators and wet suits are for my money the best on the market. They aren't cheap but most dealers give pretty good discounts.

For shallow water (75'), this is arbitrary as to depth, Desco, Inc. makes an open-circuit-surface-supplied face-plate (the same plate is used by the U.S. Navy) that is out of sight but slightly limited as to vision for about \$120. Desco also makes a complete line of heavy gear from air-hats to commercial diving dress and accessories, none of which I can say yes or no about as I have only used their shallow water mask.

The best deep-sea hard-hat is one made by Kirby-Morgan (A Division of U.S. Divers) and is called their Standard Air Hat. If you are buying or need to buy heavy-gear, I recommend (and have bought for myself) their Standard Air Hat above all others. It has the increased port area of most commercial hats for better visibility with the ruggedness and reliability of the Navy Mark V Hat.

As far as training facilities go for commercial diving there are two in Southern Cal. and one in Oakland. I investigated all of them before enrolling and finally wound up going to Universal Divers Ltd., in San Pedro. Universal is the only school that trains a man in all phases of commercial diving. Their instructors are all commercial divers of 10 or more years diving experience each and their facilities include a fully equipped commercial grade diving barge, a 40-foot pool ocean diving boat and complete classroom facilities. The course runs 10-12 weeks and at present costs \$795. It will go up to \$1000 as they will be adding a section on commercial shallow diving in the near future. This is still about \$250 cheaper than the other schools. As to periodicals and books on commercial diving there really is only one book and that is the U.S. Navy Diving Manuals. They are available at most dive shops and are the final authority on all phases of diving. The manual is a must for all divers, commercial or otherwise. Only one periodical is out that specializes in commercial diving and it is called Undercurrents. It is so new I haven't got its address yet but as soon as I do I will send it along.

(Reviewed by Michael Montenegro)

### Catalog

\$1

from:  
U.S. Divers  
3323 West Warner Ave.  
Santa Ana, CA 92702

So, get your U.S. Divers stuff from New England Divers, at about 1/3 off.

—SB

Another supplier of underwater equipment, with some commercial diving stuff like Desco masks, is:

M & E Marine Supply Co.  
Box 601  
Camden 1, New Jersey



Description	Retail	Dealer	Weight
<b>FINS</b>			
2F95 "Regulation UDT Duck Foot"			
Black M-L-XL-SXL	20.00 pr.	12.80 pr.	7 lbs.
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Description	Retail	Dealer	Weight
<b>WET SUITS</b>			
(Single Zipper on Special Order Only)			
<b>SEA MASTER 5 ZIPPER 3/16" NYLON 2 SIDE</b>			
Complete Suit			
3402-00 Sm.	3401-00 Med.		
3402-00 Med. Lp.	3403-00 Lp.	115.00	77.00
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3404-01 XLg.			
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3402-02 Sm.	3401-02 Med.		
3402-02 Med. Lp.	3403-02 Lp.	49.50	33.17
3404-02 XLg.			

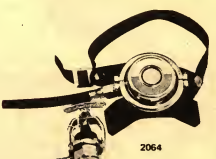
CAT. NO.	DESCRIPTION	RETAIL	DEALER WEIGHT
<b>REGULATORS</b>			
1070-00	Calypso "J" Regulator	124.50	83.75
1071-00	Calypso II Regulator	106.50	71.89
1072-00	Conshelf II Regulator	89.50	59.97
1075-00	AquaLung Regulator	65.00	43.55

Calypso "J"  
The Calypso "J" regulator epitomizes the ultimate in regulator design. The completely balanced and adjustable first stage provides effortless inhalation, no matter what the depth or tank pressure. The second stage has superior maximum exhalation which allows a diver to exhale with complete ease from any position. These two stages, coupled with the "fail-safe" reserve system and the high pressure port provide the diver with the finest breathing combination available. Patented.

1070 ..... \$124.50



**KA-13-G**  
**MAKO COMPRESSOR**  
Cat. No. 2, 4, 6 Gasoline Engine, PSI 3200,  
RPM 750, Width 14", Length 34", Height 20",  
Weight 96 lbs. 3 stage compressor, moisture  
and oil separator, activated charcoal filter. Fills  
a 70 cu. ft. tank in 29 minutes.  
Cat. No. KA-13-G ..... \$915.00

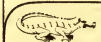


**HYDRO-AIR**  
All metal parts of chromed brass or stainless  
steel for maximum corrosion resistance. Down-  
stream second stage provides a maximum flow  
with minimum demand. Piston first stage has  
only one moving part. Back-up ring seals out  
fouling sediment. Improved contoured air ex-  
haust valves for added safety.  
Cat. No. 2064 ..... \$60.00

DESCRIPTION	RETAIL	DEALER
1 hose	35.00	25.00
Hydro-Balance Regulator	95.00	63.65
Hydro-Master Regulator	105.00	70.00
Hydro-Dive Regulator	70.00	48.00
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Hydro-Air Regulator	60.00	40.00
Pressure Gauge	15.95	11.50
Sea Wolf Watch	100.00	65.00



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Made from two compounds of high quality floating  
rubber. A soft compound for stretch and comfort  
in the foot pocket. A stiff compound along the rails  
and tip for strong blade action. These fins also fea-  
ture a high heel for a comfortable fit with or with-  
out boots. And blades with angled length and  
width which combine with extremely fine rubber  
to provide springlike blade action for effortless  
diving. Though comparatively light, these fins are  
strong and durable.  
1365 Genoa, Black 5-7 ..... \$11.50  
1366 Genoa, Black 7-8 1/2 ..... \$11.50  
1367 Genoa, Black 8-10 ..... \$12.50  
1368 Genoa, Black 10-12 ..... \$13.50  
1369 Genoa, Black 12-14 ..... \$13.50

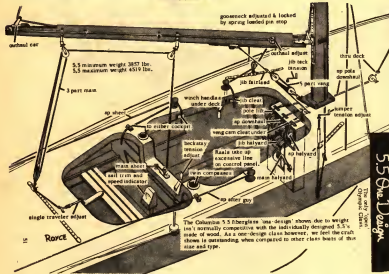
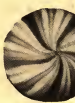


D.R. rolled over and buried his face in the sand, loose, smooth,  
clean as the purest beach. He felt it scrape the crusted mud and  
sweat and dime and blood from his face and neck, his forehead  
and his hair. He was bathing. He was a snake shedding old and  
stiffened skin. Grinning D.R. sat up and peeled off his matted  
shirt. When he pressed his chest into the sand again it felt like  
touching breasts with some warm woman. Smiling in the deepest  
pleasure he sank both arms into the sand and when he pulled them  
out he scraped the sand up into piles like breasts and then they  
laid down upon him. Exhilarated, now, he heaped to his feet and  
wrestled off the remnants of his clothes. Falling forward naked  
he spread-eagled himself upon the clean invisible sand, embraced  
it close with every surface of his body. He rolled and rolled again,  
then wiggled, pulling through it like some amphibious creature  
joyous to be on land. When he tried he stopped and nestled  
wiggling till he'd formed impressions for each contour of his body.  
Sand was under every arch, his lower back, the hollow of his  
knees, relieving every tired place in him, sending streams of rest  
through every isthmus, his mind as dark and peaceful now as the  
most silent chamber of the mine.

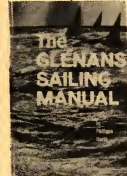


from:  
Royce Publications  
Box 1967  
Newport Beach, CA 92663

or **WHOLE EARTH CATALOG**



*This is the closest we've seen to a definitive text on small-boat sailing. Clearly illustrated.* 95

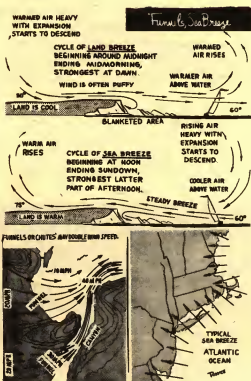
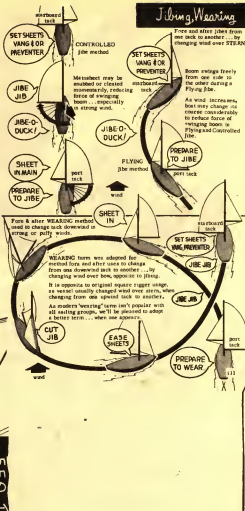


or WHOLE EARTH CATALOG



**The Chinese gybe:**  
If the sail manages to gybe before it is amidships, the bottom half of the sail goes across, while the upper half gets hung up by the cross-tees and the crew is left watching on something and stays on the original side. You can easily tear the sail. If this mishap befalls you, there is one thing to do, and only one—gybe back to get on the original tack. Anything else is bound to fail and will risk tearing the sail. (It may be noted that the term *Chinese gybe* is not an acronym for *Chinese Oriental seamanship*, which is of a very high order; the junk rig is designed to carry a gybe in this manner without unpleasant consequences.)

288 Sailing Nomadics



**\$8.95** postpaid

from: or WHOLE EARTH CATALOG  
Motor Boating  
250 W. 55th St.  
New York, N. Y. 10019



Tidal Current Charts are published for certain major bodies of water. Each is a set of 12 small-scale chartlets whose currents existing at hourly intervals throughout a complete cycle of flood and ebb.

[Suggested by Roberta Becker Marshall]

**Ocean Living**  
William Taylor, ed.  
**\$1** for 10 issues

**Dear Ocean Live! People:** We have received your Q&A issues via the Internet. It is right on what we need and are interested in. For my objection to the Vietnam war I could choose either exile or jail. But, "exile" in the United States would mean being sent to one of the islands opposite to all war, a tragic human-social sickness, and we wish to affirm life and peace as much as we can. Therefore we are building boats here, among others, to sail around the world in a traditional Indonesian style, of plywood. I am familiar with Charles Greene's Bungay boat kit company as you have talked about in one of your issues. This boat I'm building, called "Nara", appears, from all our guests' views, to be a good idea. The boat will be built with wood panels with full sail will, have a number of safety features not found in most boats, will be our family, living-boat in which we'll cruise or sail the world. We hope to sail it soon.

Miss L. Scrutton, Sic Rongo, Poste Restante, Deganyu, N. Wales;  
for plans of these catamarans Mike Romano & Family, Osthmarer,

A washing machine designed for underprivileged peoples in foreign lands, the Colgate Wash 'n Go (as it is marketed in America to campers and boaters) is not in mass production—but the last we heard a limited number were still on hand in the company's New York warehouse, selling for \$11.95. This one-moving-part gadget combines the principle of automatic washer rotation with the energy source of a Chinese hand laundry. We sent for one (and postage is included in the price) and Sara says it is much easier than competitive manual wash facilities—such as washboards and wringers or rock-and-river methods—because it does not require the use of clothespins and a cup of detergent. Operation is something like churning butter. Made of extremely light-weight semi-flexible plastic, it ain't Westinghouse, but think of the electricity you save.

Karry Thornley





International Marine Publishing Co. By the way, they have the best boat-book catalog anywhere. 21 Elm Street, Camden, Maine 04803. Put their catalog in your catalog.

OK, here's a list of good books on basics of sailing, cruising, design, and boatbuilding, with kudos comment.

#### On elementary sailing:

There's a flock of new books I haven't looked at. The old (1930s) classic, and I suspect still the best in many ways, is *Learning to Sail*, by J.L. Calahan, MacMillan, \$5.95. Calahan is clear and precise, taking on rudiments, but also in many ways than most primers. Good material on peripheral but important matters from maintenance to mooring. Out of date with respect to modern materials (fiberglass, dacron), but that just means the old materials (wood, canvas, metal rope) are thoroughly covered. A rare virtue nowadays.

*On cruising (assuming you have the rudiments of sailing covered):* Calahan has a sequel, *Learning to Cruise*, which is just as good. Again, oriented towards traditional boats, materials, and methods. You can get both Calahan's (and *Learning to Race*) in a single volume called *Yachtman's Omnibus*, MacMillan, \$8.95.

If I had to recommend only one book, it would be *Cruising Under Sail*, by Eric Hicock, Oxford University Press, \$12.75. Hicock and his wife have spent their adult lives making long voyages, including time around the world. This is the book on how to do everything, a fantastic wealth of detail given in an orderly and practical manner.

If bread for books is a problem, you can at least begin with *Cruising*, by Peter Heaton, Penguin paperback, \$1.95. This is a sketchy treatment, but a bargain. Some nice boats pictured in both plate and photos.

About money: cruising boats are very expensive. The very cheapest boats discussed in Hicock, Calahan, or Heaton, for instance, might easily cost ten or fifteen thousand dollars to build new today. Prices of old boats vary with age and condition. There are some good bargains around. However, the novice can get started pretty cheaply, since you can start, after a fashion, in very small craft. You'd be wise to start small anyway, regardless of expense, because small size reduces the scale of the mystery to be mastered.

The smallest possible is very small indeed. Robert Manny crossed the Atlantic in a thirteen-footer. This wasn't a stunt, either, but in most respects a well-planned and competent passage. It's worth mentioning that he knew nothing about sailing beforehand, but he used his good head and systematically read every book he could find. (Many have put to sea ill-informed and timbered. They always fail and are sometimes lost altogether.) Timkenbelle, Robert Manny, Dell paperback, 75¢.

The Hicock of very small boats is *Cruising Boats Within Your Budget*, by John Jacob Benjamin, Harper & Bros. This covers almost everything a beginner can learn from a book about owning, cruising in, maintaining, and losing his own very small ship. Published in 1937, and dated on materials and costs. I fear, in today's case, that it may be out of print, but it is worth looking for. In any case, I don't know the price.

My favorite manual on cruising in very small boats is The Small Boat Skipper and His Problems, by Eugene V. Conner, W. W. Norton Co. This too appears to be out of print, but it is too beautiful to neglect mentioning. It, like Benjamin, is about life aboard boats so small that pulling on your pants in the cabin becomes a logistics and engineering adventure. Much less systematic and comprehensive than Benjamin, and so perhaps less useful. But Conner, quite unambiguously, no doubt, was a Zen master, and this book is about love.

The Complete Cruiser, by L. Francis Herreshoff, Sheridan House, \$7.50, is a Victorian-style fiction in which a cast of tediously stuffy characters enact some cruiser in various boats. Some of the dialogue is unintentionally hilarious. But Herreshoff is a cranky genius and a great yacht designer, and much love and wisdom comes out of those improbable mouths. Don't make this your first book on cruising, but don't miss it either, somewhere along the way.

Plotting, Seamanship, and Small Boat Handling, by Charles Chapman, published by Motor Boating magazine, \$11.95, is a really essential encyclopedic reference, used as a textbook for Power Squadron courses. Not much on sail (written primarily for motor boats), but the best single book on plotting, with excellent stuff also on weather, marine-type seamanship, ground tackle, signaling codes, and everything else imaginable. With Hicock and Chapman you can get pretty far.

#### On design and construction

These subjects, especially design, are important to anybody who is about to actually lay out money on a boat, even if he will never do any designing or building. As in skiing, mountain climbing, playing a musical instrument, or any such subtle and beautiful skill, you will be severely limited and discouraged by poor equipment. In this field, change is not always progress, and the older boats are often better than the latest fibreglass models. Many of the contemporary mass-produced, mass-marketed fibreglass racing-cruising boats have design defects as cranking craft, and of your own defense is knowledge.

The real beginner could start with *Understanding Yacht Design*, by Edward S. Brewer and Jim Pettit, Yacht Design Institute (Brookline, Maine 04616), 8 1/2 x 11 paperback, \$3.95. This is non-technical and elementary, in fact sometimes oversimplified at the cost of clarity and precision. There are a few controversial points which are not labelled as such, but offered as gospel.

The Sailing Yacht, by Juan Rueder, W. W. Norton & Co., \$15.00, covers an enormous range of subjects from principles of design to storms at sea, though this range leads to some superficiality. It's in part a pretty good introduction to the greater aspects of design, with chapters on hull forms, rig, and aerodynamics and hydrodynamic theory as applied to sailboats. Particularly useful for the large number of plans given of boats of all types.

A somewhat more technical and far more detailed and elegant treatise is *Sailing Yacht Design*, by Douglas Phillips-Birt, *Adlard Coles Ltd.* (London), \$13.95. This may be the most useful single volume for the amateur who is really interested. Other books go deeper into certain specifics, but this covers the subject in a most lucid and orderly way, touching on history, theory, shapes, types, rigs, construction, drafting, measurement rules, and calculations.

*Yacht Designing and Planning*, by Howard I. Chapelle, W. W. Norton & Co., \$10.00 reflects the state of the art in 1936, and conservatively for him. Very good if you want to get into the actual business of designing, with a sample design worked out step by step through the book. Along the way you get valuable comments on many matters from an experienced and commonsense point of view. No theory. Superb drawings.

## Cruising Under Sail

I love any book that has the balls to fully annotate its bibliography. This one does. I can see why it's the standard cruising text.

—SB

#### Cruising Under Sail

Eric C. Hicock

1950, 1965, 468 pp.

\$14.00 postpaid

from:  
Oxford University Press, Inc.  
200 Madison Ave.  
New York, N.Y. 10016

or WHOLE EARTH CATALOG



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Cruising teaches a man to rely on his own judgment and skill, and it is one of the few worthwhile things that can still be enjoyed today by a man or woman of independent spirit, for there are no restrictions, no organizing body is needed, and the sea is open and free for all who have the inclination to sail on it and a suitable vessel for the purpose. It may cost as much or as little as one is prepared to spend, for an old and cheap yacht, provided the sea is sound, may be just as suitable for cruising, though perhaps not so convenient or such fun to sail, as an expensive one of modern design and build, and a small yacht, though not so comfortable, may be just as seaworthy as a large one.

There are many different forms of the sport. One man gets his pleasure by making short day sails along the coast, spending each night at anchor, sharing with his wife and family the peace of the creek and the novelty of life in their compact and mobile floating home. Another, who can spare the time, gets his satisfaction by making long passages in the open sea, taking the weather as it comes, and driving his yacht day and night until the fetches up in some foreign land.

Meeting steamers do not dread' When you see three lights-ahead, Starboard wheel and anchor red. Green to green and red to red, Perfect safety, go ahead. If to starboard red appear, 'Tis your duty to keep clear; As at judgment says is proper, Port or starboard, back or stop her. But when upon your port is seen A steamer's starboard light of green, There's not so much for you to do For green to port keeps clear of you.

## Sailing Hydrofoils

Very far out boats. All manner of designs and lore on home-makable boats that rise up and go like a son of a bitch. The cutting edge of sailboat design. The Amateur Yacht Research Society also has literature on Self Steering, Multihull Design, Sailing Aerodynamics, Dinghy Design, etc.

—SB

#### Sailing Hydrofoils

Amateur Yacht Research Society

1972, 288 pp.

\$8 postpaid

from:  
Amateur Yacht Research Society  
Woodcases, Hythe, Kent  
England

At the moment, we are on the very verge of seeing some remarkable hydrofoil craft which fall into two classes, namely (1) the Flying hydrofoil craft where the whole boat lifts off the water, leaving only three foils to sustain it and (2) the Hydrofoil-Stabilised craft, where a long lean boat is stabilised against the capping moment of the wind by a hydrofoil placed to leeward.

The fully flying hydrofoil sailing boat may, or may not, achieve speeds of 40 knots. Due to the limitations of hydrofoils in "cavitation", ultimate speeds of more than 45 knots are very unlikely indeed. Some development is needed, however, before such a craft is seaworthy.

The hydrofoil-stabilised sailing boat, on the other hand, if some 50 feet long could be ordered tomorrow. On built lightly enough such as in PVC foam and fibreglass sandwich, it will have a better "1% to resistance ratio" than the fully flying type up to speeds of 30 knots. It might well do 40 knots and be a fully seaworthy craft capable of righting herself from the upside down position.



American Small Sailing Craft, Chapelle, Norton, \$12.50, is the standard work on the history of all important types of small sailing craft and their evolution, and a source of working sail in America. A great classic. More superb drawings.

The Common Sense of Yacht Design, by L. Francis Herreshoff, *Causeway-Marine Books*, \$25.00, is another classic. Herreshoff, one of the great designers, is an eccentric artist, and this work is rambling, anecdotal, opinionated, insightful, entertaining, personal, and especially instructive. Also occasionally wrongheaded. It covers somers or later and somehow or other most subjects of importance. Some exquisite drawings.

Boatbuilding, Chapelle, Norton, \$15.00, is the standard text on traditional wood construction, and Boatbuilding Manual, by Robert M. Steward, Posidon Publishing Company (Lakeville, Conn. 06039) is a useful and more modern supplement.

Peace,

Mal Eddy

Eddy & Duff

Harbor Rd.

Mattapoisett, Mass. 02739

Eddy & Duff build a nice fiberglass and wood cruising boat, the Stone Pony. Info: 31.

—SB

Bill Prior's second flying hydrofoil

## National Fisherman

The saltiest publication I know. Fishing, boatbuilding, ocean conservation, oceanography, sea news. A trade publication with a dignified nod to the sea buffs. Damn good newspaper.

—SB

[Suggested by Paul Wingate]

### The National Fisherman

\$4.00 for one year

from:  
The National Fisherman  
22 Main Street  
Camden, Maine 04843

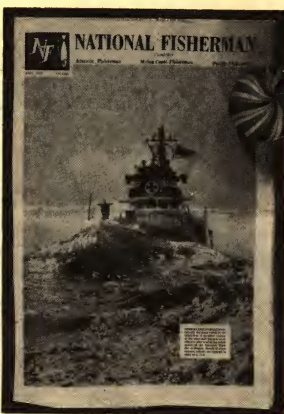


**WANTED — CREW FOR OCEANOGRAPHIC RESEARCH**  
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Assistant Engineer  
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however, Maine or Hawaii — send information regarding education and experience.  
TWIN ISLAND BOAT COMPANY  
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### By D. Karl Hoppe

The Dept. of Defense in Washington has begun an investigation into the apparent dumping into the ocean of a can of DDT, a highly toxic pesticide — which may have come from a military installation.

The DDT can, painted an olive drab military color, was pulled from water 20 miles west of Bodega Bay, Calif., by Ferndale, Calif., fisherman Thomas C. Webster Jr., owner of the dragboat Havans and Franklin. Webster said that during the same trip to the southern fishing area and a crew of three from the Havans also netted a 2.75" aircraft rocket, which was immediately thrown overboard for fear of possible explosion.



## The New World of the Oceans

Everybody says, The Ocean is Next, and that's probably right. Every bookstore has a line of ocean popics for your refreshment now. The book of Behrens's has more protein than that. If you're planning to go down to the sea in science, he can let you know where science has been with the sea. He can also get you giggling proper.

—SB

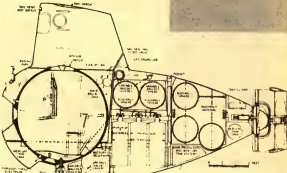
### The New World of the Oceans

Daniel Behran  
1989: 436pp.

\$2.95 postpaid

from:  
Littla Brown and Company  
200 West Street  
Waltham, Massachusetts 02154

or WHOLE EARTH CATALOG



## Fish Catching Methods of the World

definitely not about sportfishing, brandt concerns himself with harvest fishing, food fishing, money fishing, dispersion fishing, corporation fishing, nets, spears, traps, explosions, harpoons, diving equipment, and fishing with bare hands and teeth. It is an expensive book, but I don't know of another that runs through everything the way this one does. it would be of particular use if you are going to try circumnavigating the earth on a surfboard.

FISH CATCHING METHODS OF THE WORLD

—jd

### Fish Catching Methods of the World

A. von Brandt  
1964, 191pp.

\$15.00 postpaid

from:  
Fishing News Books Limited  
110 Fleet Street  
London EC4, England

Fishing with hand grenades as practiced after both World Wars was particularly damaging. The hand grenade was actually called "soldier's fishhook." When a hand grenade was exploded in an experiment a diver brought up from the depths ten times more fish than was gathered on the surface.

Fish in the dynamite in Brega became rather notorious, but there it has now also been prohibited for the reasons mentioned. It happens, however, that sharks are attracted by such explosions since they have learnt that the acoustic stimulant meant that they could easily get fish for themselves! Dynamite explosions are therefore now used in some places to attract sharks.

Dynamite in small quantities, however, can be very useful for frightening the fish. Purse seiners in California use small bombs to frighten the fish before the gear is completely pursed and closed. These bombs are called "cherry-bombs" after their original form. In the Philippines, where fishing with large dip nets is practiced, a small explosive is used to stun the excited fish and so prevent their escape when the net is lifted. This too, however, is illicit, although it is well known that the use of dynamite may possibly determine whether any particular operation is a success or not. If the fish are not badly damaged, they are stunned only temporarily and will soon recover. This fact then explains why the loss of fish can be relatively small after underwater explosions by blastings, bombs or by firing at a lake during warps.

## Oceanography in Print

A Whole Oceans Catalog! This pamphlet is certainly of use to anyone wanting to learn about the sea. It gives access to information ranging from "elementary" to "adult technical" interests. The preface makes a claim about the ease of obtaining most of the books listed from public resources—checked out, they are easy to get.

[Reviewed by Mary McCabe]

### Oceanography in Print

58 pp.

free? from:  
Sailing Book Service  
34 Oak Avenue  
Tuckahoe, N.Y. 10707

Ricketts, Edward F., and Jack Caloun. 1952. BETWEEN PACIFIC TIDES. 3rd edition. Revised by Joel W. Hedgerth. Stanford, Calif.: Stanford University Press. A detailed account of the habits and habitats of the animals which live in the rocky shores and tide pools of the Pacific Coast. The book is invaluable for its reflection of the spirit of a remarkable man, John Stenbeck's foreword is also not to be missed.

## What Everyone Should Know About Oceanography

A practical intro. Has all the publications, organizations, institutions, and rough information on what you're getting into.

—SB

### What Everyone Should Know About Oceanography

Robert M. Snyder  
1970, 50 pp.

\$2.00 postpaid

from:  
Snyder Oceanography Services  
Jupiter, Florida 33458

## Martinspike Seamanship

Several editions to your books on knots and sailing (all of these are published by Brown, Son & Ferguson, Ltd. 52 Darnley Street, Glasgow, S.1. Costs are post-paid in USA) Martinspike Seamanship by Leonard Popple is the classic text on wire-rope splicing. While he is more concerned with 1-inch diameter cable, I've used his technique on the 3/8 in. balyards on my sailboat. Since professional splicing is about four dollars per foot, there's more than just appeal involved, especially since the book costs \$1.30. His other book, Advanced Ropeworking (\$8.00) discusses splicing large hemp rope, making fenders, etc. and is most valuable as a discussion of tools and techniques, rather than as a cookbook. Three books by Blandford (see p. 57 of the Spring Catalog): Rope Splicing (1.75), Working in Canvas (1.00), and Netmaking (1.60) are all well worth their prices. The latter two should be quite valuable to any tent-dweller who claims that they play tennis or poaches. A friend of mine who sailed on a five-masted bark, Antares, mentioned that the ship was completely re-rigged recently. As an "instruction book" they used Harold Underhill's Masting and Ripping the Clipper Ship and Ocean Carrier. He used the book to re-rig the Baltic Gales (schooner with mainmast off). Along with several other books by Underhill, there are excellent introductions to how these sailing ships "worked." (It costs \$8.62). Their catalog "N" is free.

Martin Minow  
Bromma, Sweden

For more knots, see p. 125.

As one of its manifold functions, UNESCO has traditionally served as a foster home in Paris for sciences in need of a place to hang their international hats, offering a maximum of independence as long as they were willing to accept a minimum of money. (This is true of science everywhere—the amounts of independence and money are inversely related.) It is something like those little French country cafes that post signs announcing they will take customers who bring their own provisions.

The pendulum of scientific inquiry keeps swinging between observation and synthesis. Aristotle had to resolve such a conflict: according to Sir John Murray, editor of the reports of the Challenger Expedition, Aristotle threw himself into the whirlpool of the Strait of Oropos, separating Euboea from the Greek mainland, because he was unable to explain it.



ADORATION OF THE LIGHT

Beyond those looming shapes is brilliant light but here are only shadows reaching out across a vast and empty plain. I'm crossing an enormous floor, an oceanic oceanic smooth I didn't even stumble when the light was far away. I'm near it now. It pours down in a shower from up above. It streams, it falls, it's a column made of light, a shape that's shaped like stone and stone with light inside.

The light's a mass of molded stone hanging in a chamber like a frozen waterfall.

It's a stalks shaped like some cathedral spire, hanging upside down, a perfect pearl of stone with light inside, shining out through jewels that cling like beads of moisture on a melting tower of ice. Above, it widens and is lost in the high, vaulted ceiling of the chamber. It narrows to a tip that points into a pool of water down below the rocky ledge where I now stand. It shines so bright above it blinds me to look up, but in front and down along the falling spire its light is soft, a comfort to my eyes. Above, the light is blinding white. Below, it's tinted by the jewels to soothing amber.

It can gaze into a chamber without blinking. It bathes me in its amber, in its glow, in its love so sweet a subtle sense of danger can't intrude.

Danger tries. It makes a scraping sound behind me. But the love will not allow me to turn away. I hear it clearly. The sense tries hard to penetrate. It bangs and clamors for attention, but my eyes will not be moved from this love they finally see.

It scrapes behind, and now it hisses. I feel it, coming close, my skin is warmed and thrilled by some anonymous hostile force behind. My eyes see his eye shining in the murky dark. My stomach turns, my hair feels wild, but my adoration of the light remains serene. It's only David's eyes, and lower forehead. The rest is monster, the mugh of dragon teeth, the chin and jaws and head leading into short, thick neck and shoulders are horse and scales and fur. Oh it's true all right. He's the monster-guardian of the light. But adoration is quiet in my breast. My love can know no fear.

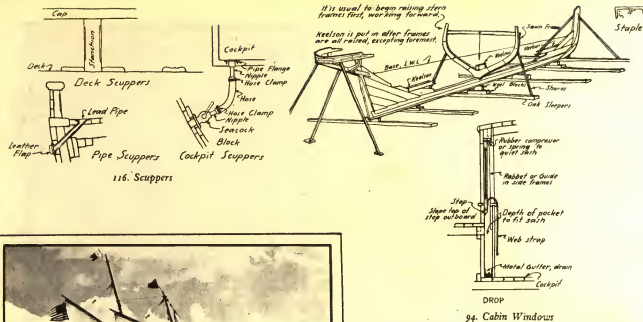
Leave fear to the fish. The fish is better terrified, stronger for the wars. Scared fish can attack, a quick defense into the very teeth of monsters of the dark, throwing dust into their eyes swinging wilder human fingernails as claws. Oh yes, my friend. It's joined now. Stink back goldeneye you hide back in your lair. My flesh is anger and my love serene. It's time, old friend. I'm here.



## Boatbuilding

This is the book for the man who wants to put together a boat he can live in and with. Chapelle is full of ideas for getting the maximum use of the limited space on a boat. He is also the easiest way to avoid all the miserable pitfalls one can encounter: leaking hatches and deck seams, toilets that don't work on one tack, or back up and fill the bilge, storage that rots its contents or dumps them on the deck at the first wobble. There is even a chapter on hand tools and how to use them. The book is generally considered the standard reference of the boatbuilder. Its single drawback is its age (first published in 1940) so it misses the latest developments in materials. Still, it's the best I've seen for staying out of trouble.

[Reviewed by Christopher E. Prael  
Suggested by everybody.]



## BOATBUILDING

by HOWARD I. CHAPELLE

Boatbuilding  
Howard I. Chapelle  
1941; 624 pp.

\$15.00 postpaid

from:  
W. W. Norton & Co., Inc.  
35 Fifth Avenue  
New York, N. Y. 10003

or WHOLE EARTH CATALOG

## Amateur Boat Building

A publication of kinks, crochets, tips, arguments, gossip, plans, reviewers, ads. Build a couple rowboats before you build a ship, that's the message I get.

—SB

## Amateur Boat Building

Austin Cole, ed.

\$6./yr (monthly)

from:  
International Boatbuilding Society  
3183 Merrill  
Royal Oak, Michigan 48072

## Chapelle

I suggest the inclusion of a book called American Small Sailing Craft, by Howard I. Chapelle. The book was published by Norton in 1951 and although it's out of print, copies can be obtained from Caravan Books still available from W. W. Norton 35 Fifth Ave. Jamaica, N.Y. 11432 \$12.50  
... Price will vary according to condition of book, but expect in the 10-20 dollar range.

Howard Chapelle is the W.F.A. (World's Foremost Authority) on the design, construction and evolution of sailing vessels, although he presents an obvious historical-antiquarian bias. He's a marine architect and a professor of maritime history (Harvard) and is now one of the directors of the Smithsonian Institute. His best-known works deal with large sailing ships of the XVIII-XIX centuries, and his two books on design and construction are outdated (dealing entirely with wood, pre-fiberglass and ferro-cement) but American Small Sailing Craft is a book no boat freak should be without.

It is interesting, chavinism notwithstanding, that coastal North America has produced more and better types of small sailboats than any other culture in history. This is the importance for the book. SOMEWHERE in these pages is a design for a sailing rousing (auxiliary power not impossible) boat which is PERFECTLY suited for whatever work load and weather and sea conditions any sailor, boat builder or water freak may have to face. If you want to buy, build or have built your IDEAL boat for work, travel or pleasure, this is the place you should look first. There are lake boats as well as deep-sea craft. Pacific and Gulf Coasters as well as Down East types discussed, and there is a detailed drawing (at least) of every type mentioned. Which is EVERY TYPE. If you happen to live in, say, Casper, Wyoming, it's a hell of an interesting book anyway. Bear in mind that marine construction techniques are applicable in many ways to land structures.

It's probable that many of the designs included in the book could be executed in ferro-cement. I'm sure any of them could be done in fiberglass.

Thom Lee Whorton  
Middletown, New Jersey

## Amateur Yacht Research Society

Last letter to you I told you about the "amateur yacht research society" well I forgot a very important feature. A correspondence course in yacht design is offered.

In 24 lessons of about 2000 hours work, cost is \$325 payable in small instalments with each lesson. For further information write Yacht Design Institute, 111 Woodcrest Avenue, White Plains, New York 10604.

The sea is the last "free range" it's your last chance to "be a cowboy"

Love,  
Bill Lange  
Sweden

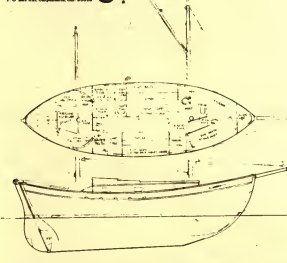


JOHN ATKIN—24' DAY SCHOONER  
LOA 22' 4" / LWL 20' 0" / Beam 7' 8" / Draft 3' 0"  
S. A. 297 sq. ft. / Displ. 5,888 lbs.  
Ballast 765 lbs.

Plans are \$50.00 per set, glossy photograph is \$2.00. Write to John Atkin, P. O. Box 3005, Norton, Conn. 06820.

## DREADNOUGHT BOATWORKS

P. O. Box 805, Hingham, Mass. 02043



"The Dreadnought is designed for completion by a person of average ability for less than \$7,000."

## Dreadnought Glass Hull

For anyone interested in a cruising knowledge of boatbuilding, there is now in production a Tahiti ketch. It is modelled after the adios, a three-times-around-the-world traveller. For \$3800.00 you can have a hand-laminated hull of heavy fiber-glass, one-piece construction with the bulkheads, the shelf, chainplates and clamps in place. It is 32 feet long with a 10 foot beam and can be ketch or cutter-rigged. Contact:

Dreadnought Boatworks  
Box 221  
Carpenteria, Calif. 93013

Mr. & Mrs. Michael Gazzaniga  
New York City, N.Y.

## Boatbuilding Manual

With this in combination with Chapelle you've got boat-building technique just about surrounded.

Boatbuilding Manual  
Robert M. Steward  
1969; 220 pp.

\$9.50 postpaid

from:  
International Marine Publishing Co  
21 Elm Street  
Camden, Maine 04843

or

WHOLE EARTH CATALOG

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## Practical Ferro-Cement Boatbuilding

I'd call this the funkiest and far most practical of the f.c. books. Also see p. 105.

—SB  
(Suggested by Daniel Earle)

### Practical Ferro-Cement Boatbuilding

Jay R. Benford, Harman Huesen  
1970, 179 pp.  
\$7.50 postpaid  
from:  
J.R. Benford  
Box 458  
Friday Harbor, Washington 98750

### Used Boats

Anyone looking for a used (and sometimes new) boat or related equipment in the Northeast should get ahold of a copy of Soundings. Covering the coastal area from New Jersey to Maine this newspaper of pleasure and usable boats in season has as many as 5,000 classified listings for everything from ocean racers to long-bow canoes. And each month you get pages of news and features about boats and tricks of the trade in boating and sailing or canoeing and people, on and around the water.

A year subscription \$5.

Soundings  
Box 210  
Wethersfield, Conn.

On the West Coast the same type of newspaper is available from:

Yachtman  
Box 819  
Rio Vista, California 94571

A year subscription \$3  
35¢ per copy  
3 years \$7.50

James H. Lawton  
Paynes Creek, California



TRADITIONAL old English gaff ketch. Comfortable accommodation, two heads, eight berths. Interesting history. Good condition. \$15,000. Contact Carls Cruises Ltd., P.O. Box 188, Castries, St. Lucia. PABCBZ

### Simple Steam Engines

Develop fire to twenty horsepower with wood or coal. Ride up the river. Finished engines or kits.

—SB

Simple Engines Co., Inc.  
Box 9384  
St. Louis, Mo. 63174

### Simple Steam Engines

Five Horsepower (single)  
No. 34 30" 3" 4" - wheel reverse \$430  
No. 34 DL 2" 3" 4" - lever reverse \$513  
Ten Horsepower  
(compound - 2 cylinders)  
lever reverse \$980

Simple Marine Power Units  
(Engine, Boiler, Accessories)  
Five Horsepower (standard) \$1290  
Five Horsepower (special) \$1500  
Ten Horsepower \$2120  
Twenty Horsepower \$3860  
Condenser (optional on 5 hp) \$ 85

### Magazines:

"Steam Power Quarterly" \$6.00 a year  
Dick Phillips, Editor  
12010 Rivers Avenue  
Downey, California 90242  
"Light Steam Power" \$5.80 a year  
Kirk Michael  
Isle of Man, G.B.  
"The Iron Men Album" \$3.00 a year  
Enola, Pennsylvania

### Luger Boat Kits

Luger makes a line of boat kits intended for assembly by the inexperienced amateur. They have powerboats from 14 to 32 feet, sailboats from 14 to 20 feet, all in fiberglass, and a 22 foot houseboat of wood. The basic kit consists of all the parts needed for a bare boat. These parts are pre-cut to size and shape so no layout and cutting is necessary. This saves you about a quarter or a third of the effort necessary to build a boat from scratch. The quality of these parts is very high and they will make a strong, safe boat. However, pay no attention to Luger's estimate of time for building the bare boat. I put in 500 man-hours on my houseboat, they predicted 128. The instructions must be carefully read and re-read, because they do contain mistakes. For example, I found I had to drill holes through a lead-up fiberglass job (Step No. 17) in order to install a bracing member (Step No. 32).

Their prices for the bare boat kits are reasonable. Their bare boat doesn't contain such "accessories" as windows, galley hardware, head, latches, hinges, trim and upholstery. Luger sells these as extras. They are generally not of the same quality as the boat itself. In fact they are mediocre and overpriced. I would advise getting your accessories from a mail order discount hardware dealer.

Luger's Customer Service Dept. is slow and inefficient, but they do stand behind their guarantee. They'll gladly give you a "no-questions-asked" refund on anything you wish to return.

Best of all, their catalog is free. It's well worth looking at if you're seriously considering building yourself a boat. P.S. Presently, I'm living on my boat in a marina. I think living on the water is one alternate that many people overlook. The rent is cheap (averages about \$2.00/month for every foot of boat length. 22 foot boat cost \$44/month for moorage). The people are friendly (they're all boat freaks, or they wouldn't be there). My 22 foot house boat cost me about \$2600 to build and finish without power, which is a fairly inexpensive home. It's a good life.

(Suggested and reviewed by  
Stephen Schwartz)

### Catalog free

from:  
Luger Industries, Inc.  
1300 East Cliff Rd.  
Burnsville, Minnesota 55378



- He could move and build his boat in an area where experienced boat plasterers are available.
- He could transport a crew of experienced boat plasterers to his job site.
- He could transport the foreman only of an experienced boat plastering crew, and fill out the crew with local plasterers (Not cement finishers who are unused to working on vertical surfaces and who do not normally use a hawk in their work.)
- He could employ a local crew of professional plasterers who have had no boat experience, use whatever printed material he can find on the subject as a guide, and hope for the best.
- He could call in a crew of inexperienced friends and proceed as in d.) above.

As one proceeds down the above list of possibilities, the probability of producing a hull with an acceptable finish diminishes. Although it may be possible for a group of careful, hard-working and experienced builders to plaster a hull without professional help and make it structurally sound, the finished product might be an abomination to look at.

As ferro-cement technology advances, it may be that techniques will be developed which will allow the amateur to produce an acceptable, smaller hull with only the help of some inexperienced friends. The probable sequence of this technique would be to:

- produce an exceptionally fair armature,
- plaster in the usual fashion,
- scrape and broom both the inside and the outside of the hull,
- care, and
- after the vessel has cured, glaze the outside of the hull with a glazing compound which can be sanded and shapd.

### Ferro-Cement Boat Construction

The establishment book. If I were building with f.c. I'd want every book on the subject. This one has excellent technical information on treating concrete, mixing procedures, curing, design factors, etc. No nonsense.

#### Ferro-Cement Boat Construction —SB

Jack R. Whitener  
1971, 126 pp.

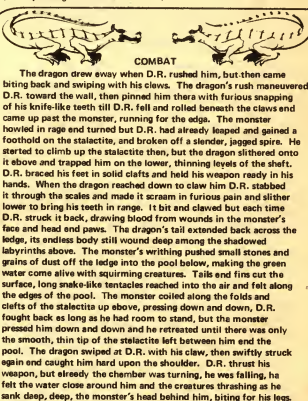
\$10.00 postpaid

from:  
Cornell Maritime Press, Inc.  
Box 109  
Cambridge, Maryland 21613

#### or WHOLE EARTH CATALOG

When comparing the weight of a ferro-cement hull with that of a similar wooden hull, remember both will be the same weight at around the 30-foot length. If one progresses beyond the 30-foot length, then the ferro-cement hull becomes some five percent lighter than a similar wooden one. Going the other way, the ferro-cement rapidly gets heavier than wood, unless one uses less hull thickness. The average hull thickness for this discussion will be about one inch, though on hulls smaller than 30 feet one can certainly go to a thinner hull.

Ferro-cement hulls larger than 30 feet in workboats, power cruisers, or sailboats are actually accounted to build when compared to wood, steel, aluminum or fiberglass. Ferro-cement gives an increase in interior space for the same weight as wood construction, something on the order of 12 percent. This is due, of course, to the elimination of thick beams and frames, and to greater planking thickness, especially in larger hull sizes.



The dragon drew away from D.R. rushed him, but then came biting back and swiping with his claws. The dragon's rascal maneuvered D.R. toward the wall, then pinned him there with furious snapping of his knife-like teeth till D.R. fell and rolled between the claws and came up past the monster, running for the gate. The monster howled in rage and turned but D.R. had already leaped and gained a foothold on the stactite, and broken off a slender, jagged spire. He started to climb up the stactite then, but the dragon shifted and it above and trapped him on the lower, thinning levels of the shaft. D.R. brought his fist in solid clasts and held his weapon ready in his hands. When the dragon reached down to slay him, D.R. leaped through the scales and made it scream in furious pain and slither lower to bring his teeth in range. It bit and clawed but each time D.R. struck it back, drawing blood from wounds in the monster's face and head and paws. The dragon's tail extended back across the ledge, its endless body still wound deep among the shadowed labyrinthine above. The monster's writhing pushed small stones and grains of dust off the ledge into the pool below, making the green water come alive with squirming creatures. Tails and fins cut the surface, long snake-like tentacles reached into the air and felt along the edges of the pool. The monster coiled along the sides and clefts of the stactite up above, pressing down and down. D.R. fought back as long as he had room to stand, but the monster pressed him down and down and he retreated until there was only the smooth, thin tip of the stactite left between him and the pool. The dragon swiped at D.R. with his claw, then swiftly struck again and caught him hard upon the shoulder. D.R. thrust his weapon, but slowly, the chamber was turning, he was facing, he felt the water close around him and the creature thrashing as he sank deep, deep, the monster's head behind him, biting for his legs.

D.R. felt the teeth sink in, then something stirring, burning in his veins, a string's tension. D.R. twisted and tried to pull away but the monster held him fast between its teeth and dragged him down. D.R.'s legs were numb now but there was strength yet in his back and arms. He saw the monster clearly in the light his spire gave off, and the misadventured till he had a proper angle. With both hands he swung the spire and stabbed the monster in the eye. He stabbed again, and sunk the spire so deep into the second eye he couldn't pull it out again. Black blood spurled and darkened the churning water as D.R.'s own mind darkened into sleep. In his deaththroes the dragon plunged, carrying D.R.'s body and its own through endless fathoms of the deep.





## West Products

To the boat owner/builder—or someone with a similar cramped living space such as a VW camper bus, trailer, dome or tree house—West Products offers an excellent chance to order high quality fittings, tackle, rope, etc. at extremely low prices. Compare the usual Yacht Store prices with West's for "Dacron" rope.

[Suggested and reviewed by Dr. Stephen Morris]

### Catalog

free

from:  
West Products Corp.  
P.O. Box 707  
Newark, N.J. 07101



100% DU PONT  
"DACRON"  
TYPE 67 FIBER  
MARINE ROPE

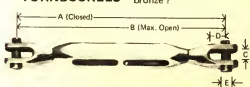
LAID CONSTRUCTION

Seal/Line marine "DACRON" rope is available in any length you require. All orders are put up on shipping reels. Quantity price reductions usually occur for 300 and 600 foot increments. In between lengths are priced accordingly.

Catalog #	DIA.	average lineal strength	PRICE PER FOOT				Shipping per 100 ft.
			1 ft. 200 ft.	300 ft. 500 ft.	600 ft. 800 ft.	100 ft.	
12-303	3/16"	1000 lbs.	31¢	31¢	31¢	2 lbs.	
12-304	1/4"	1800 lbs.	43¢	43¢	43¢	3 lbs.	
12-305	5/16"	2900 lbs.	75¢	75¢	75¢	7 lbs.	
12-306	3/8"	3600 lbs.	115¢	115¢	115¢	6 lbs.	
12-307	7/16"	5200 lbs.	154¢	145¢	144¢	8 lbs.	
12-308	1/2"	6500 lbs.	185¢	185¢	175¢	9 lbs.	
12-310	5/8"	10000 lbs.	304¢	295¢	294¢	13 lbs.	
12-312	3/4"	14000 lbs.	424¢	415¢	414¢	19 lbs.	

### STAINLESS STEEL TURNBUCKLES

At these prices,  
why buy  
bronze?



Unsurpassed for strength, durability, and appearance, these Turnbuckles are made of the most corrosion-resistant material available. Built in Sweden of Type 316 Stainless Steel and polished to a high luster to increase corrosion resistance and beauty. Even the cotter pins are of the same high grade metal through the ends as well as through the middle barrel.

WORKING DIMENSIONS						Approx. Tensile Strength
SIZE	A	B	C	D	E	
1/4"	5 3/4"	8 1/8"	1/4"	3/8"	3/16"	3,500
5/16"	6 7/8"	9 5/8"	5/16"	5/8"	5/16"	6,300
3/8"	8 1/2"	11 1/8"	3/8"	5/8"	5/16"	9,800
7/16"	8 1/2"	11 5/8"	7/16"	5/8"	3/8"	9,800
1/2"	9 3/8"	12 1/4"	1/2"	3/4"	7/16"	14,000
5/8"	12 3/16"	16 5/8"	5/8"	1"	9/16"	19,000

SIZE	Cat. #	PRICE	WGT.
1/4"	22-104	\$10.00 ea.	1/4 lb.
5/16"	22-105	\$11.50 ea.	1/2 lb.
3/8"	22-106	\$13.00 ea.	3/4 lb.
7/16"	22-107	\$15.00 ea.	1 lb.
1/2"	22-108	\$19.00 ea.	1 1/4 lb.
5/8"	22-110	\$33.00 ea.	2 3/4 lb.

### FREE MASTER CHART SELECTOR.

U.S. Coast and Geodetic Survey Chart Selectors for Atlantic and Gulf Coasts Chart Catalog #1 FREE Pacific Coast & Hawaii Chart Catalog #2 FREE Alaska Chart Catalog #3 FREE Lake Survey: Catalog of Great Lakes charts, FREE U.S. Naval Oceanographic Master Chart Selector for United States, Cat. Region "O", Canada-Cat. Region "H" [Other areas of the world on request.] 35¢ EACH

## Defender Industries

If boating is your bag & you are a self-help enthusiast you need the "Defender Industries" catalog of marine hardware & accessories. If it has to do with boats, they have it: engines to dacron sails, bilge alarms to fiberglass roving. Included are pages of information on new products, application procedures for some of the materials, construction & maintenance tips for boaters and space devoted to "How to Build a Fiberglass Boat." Defender Industries claim that they are "one of the most complete marine supply firms in the world." They say their prices are competitive and "should we be under-sold on any current standard materials, you may place your order at the lower price by merely including a tear sheet from the cheaper source, and we will fill your order."

[Suggested and reviewed by C. P. Christianson]

### Catalog

\$50

from:  
Defender Industries, Inc.  
384 Broadway  
New York, N.Y. 10013



### ROPE & SAIL SEWING KIT

Everything you need for rope and sail work, in a single heavy-duty nylon drawing kit bag. The top quality materials include: Seal/Line Stainless Steel riggers knife with marlin spike. • Heavy-duty leather sewing palm (specify right or left hand). • Swedish half-round Stainless Steel fid. • 4 nickel-plated English "sailmaker's" needles. • 2 Stainless Steel sewing needles. • 2 rolls of Seal/Line waxed nylon whipping thread. • 2 rolls of white Seal/Line nylon sewing thread. • 2 rolls of Seal/Line utility tape. • 1 roll of sail fabric repair tape (1 1/2" wide).

Cat. No. 15-319 \$10.95 plus postage  
Knife Engraving: Max. 12 letters on one line, \$1.20 [add 10¢ each additional character or punctuation. Max. total 2 lines, 20 spaces per line].

### Additional Needles and Sewing Palm

4 nickel-plated steel English sailmaker's needles in a waterproof val. Catalog No. 15-322 50¢ pdd. U.S.A.

Individual needles 15¢ each pdd. U.S.A.  
2 1/2" Catalog No. 15-3221 2 1/2" Catalog No. 15-3222 3" Catalog No. 15-3223 2 1/2" Catalog No. 15-3224

Heavy-duty leather sewing palm \$1.95 Pdd. U.S.A.  
Right-Hand Palm Catalog No. 15-3231  
Left-Hand Palm Catalog No. 15-3231

## Discount Marine Hardware Ltd.

Another marine discount catalog. They claim low prices on British Seagull motors and Avon inflatable boats.

—SB

### Catalog

\$4.75

from:  
Discount Marine Hardware Ltd.  
875 A West 15th St.  
Newport Beach, CA 92660



### RAY JEFFERSON MODEL "4150A" MARINE RADIO TELEPHONE—

Eight crystal controlled channels plus standard broadcast band — \$499.95 List Price  
Complete with four crystals, Microphone and Universal Mounting Bracket. ~~\$599.95~~ **\$399.95**



## DAVIS SEXTANTS

(K301-2)

DELTANT & CASE

Deluxe

\$49.50

\$39.95

These sextants are brand new and made of heavy gauge plastic to resist corrosion. Clearly marked Vernier reads to two minutes of arc. With your sextant you will receive a booklet that clearly explains:  
• Position Reading by the sun • How to use the sextant as a goniometer • How to use sextant as a heliograph  
• How to take sights with the artificial horizon when far away from the sea • Equation of Time • Measuring the Sun's Altitude • Finding Longitude • The Complete Story of Some Great Yacht Races Known as How World Knowledge. Includes instruction booklet

## 3M FILTER MASK

Protects against non-toxic dusts and sprays for breathing safety



So inexpensive it can be discarded after one wearing, or used if desired. Workers who refuse to wear other masks will wear the lightweight "3M" Brand Filter Mask. It provides three to five times the filter area of other masks. The entire mask is made of flexible filter material, specially contoured to stand away from the face. Only contact is at the edges where it seals against the skin. One mask fits all faces—no straps or ties to adjust. It's so light that 7 masks weigh only one ounce. No 8500 4 for 95¢

## HENDERSON DIAPHRAGM PUMP

Made in England



One of the best and simplest pumps in the world. List \$62.95 Net \$42.95 Lowest price anywhere

## PART SIX



LET EVERY SOUL BE SUBJECT  
UNTO THE HIGHER POWERS

Mrs. Godsey was in the post office in the far corner of her store, sorting through the Tuesday morning mail. As if people had known it would be a puny delivery that morning, only Mrs. Thornton was there waiting for Mrs. Godsey to hand the letters out. Most days the store was half full of people waiting on their mail, five, six, sometimes as many as a dozen of them, sitting in chairs or leaning against the soft drink cooler, waiting and talking with Mrs. Godsey organized the mail for distribution. But this morning there was only Mrs. Thornton, and to Mrs. Godsey's mind that was just as well. The only mail in the whole batch that was in the least bit personal was a post card to Wendell Hall from his daughter in Detroit, and she was asking for money. Mrs. Back's copy of The Upper Room came, and Barry Berry got a statement from the Famous Writer's School. Old Mr. McClanahan got a brown envelope from the Social Security Administration but you could tell just by looking that it didn't have a check in it. Circulars, statements, bills, and fourteen identical blue envelopes with white writing on it, promotional literature from the Stewart Kewy Soap Company in Chicago addressed to "Boxholder", Trace Fork, Kentucky, and that was it, as sorry a batch of mail as Mrs. Godsey had seen in all the years she'd been postmistress.

"I declare it looks like that Charlene would write me," said Mrs. Thornton. "I written her twice this last month and narry a peep have I heard. I begun thinking she don't much care about her old nomma any more."

Mrs. Thornton wiped a tear from her eyes with the cuff of her long sleeve. "Now honey, you know that ain't so," said Mrs. Godsey as she came out of the little cage that the post office. "You know it ain't like Charlene not to write."

"Sometimes I believe it is," said Mrs. Thornton. "Sometimes I know for sure it is."

Boat Supplies  
Nominics

295



## Stick and Rudder

Subtitle: "An Explanation of the Art of Flying." This book was written in 1944 and is still, I understand, the basic flying book. Writing, illustration, comprehensiveness—it's a full-throated classic. I've never flown a plane, but I've flown other stuff, and every page glimmers with useful hints for every kind of flight. Maybe some *Suif* pilot would like to do an allegorical review of this profound book.

—SB

**Stick and Rudder**  
Wolfgang Langewiesche  
1944, 389 pp.

\$8.95 postpaid

from:  
McGraw-Hill Book Co  
East:  
Princeton Road  
Hightstown, N.J. 08520  
Mid-continent:  
Manchester Road  
Manchester, Mo. 63062  
West:  
8171 Redwood Highway  
Novato, Ca. 94947  
or WHOLE EARTH CATALOG

## Stick and Rudder

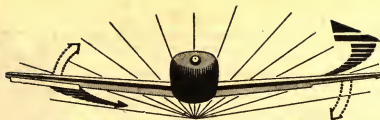
An Explanation of the Art of Flying



WOLFGANG LANGEWIESCHE

Stick and Throttle. The so-called "reality" is really its up-and-down control. This is hard to believe but is one of the keys to the art of piloting.

On wings it is safe to be high, dangerous to be low; safe to go fast, dangerous to go slow. Generally speaking, if you want the airplane to go up, you point its nose up; but point its nose up a little too much, and you go down in a stall or a spin. In landing an airplane, to make it sink down on the runway and stay down, you move the controls much as for an extreme upward zoom. In the glide, if you want to descend more steeply, you point your airplane's nose down less steeply; if you want to descend less steeply, you point the airplane's nose down more steeply! And—most spectacular contrariness of all—in emergencies, when the airplane is sinking toward the ground in a "mush" or falling in a stall or a spin, and you are afraid of crashing into the ground, the only way to keep it from crashing is to point its nose down and dive at the ground, as if you wanted to crash!

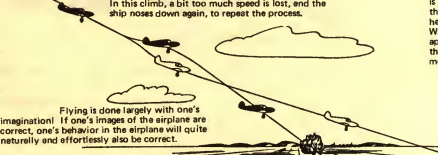


The adverse yaw effect. Ailerons have two effects. While a turn: rolling effect is what pilot wants. Black arrows: yawing effect is an undesired by-product of rolling effect. Here, the pilot banks to (his) left, presumably in order to turn to the left, but the airplane at the same time yaws to (pilot's) right. That's why this yaw effect is called "adverse." Pilot must kill this effect by using rudder.

Hence the Angle of Attack cannot be seen simply by looking out the window; in fact, it cannot be seen at all! For remember, Angle of Attack is the angle at which the wind meets the air—and we can't see air. That is perhaps largely why flying is so much an art. In baseball the batter keeps his eyes on the ball that he is going to hit. Flying is the art of battling the air down with our wings; but in flying, our trouble is that we can't see the air; hence we often fail to hit it right, and hence so many of us break our necks.

Take your hands off a good airplane's stick, and it will do a good job of flying all by itself. Take your feet off its rudder as well, and many airplanes will even then do a fair job. The airplane has a built-in will of its own, and generally speaking it wants to do whatever is necessary to maintain healthy flight.

In actual practice most airplanes have a tendency to hunt. This means that with the controls released, the ship will not fly at constant speed but will oscillate up and down, now dropping its nose, building up speed, diving for perhaps 10, 20, 30 seconds. Then, with its essential stability and better self asserting itself, it will catch itself, raise its nose, try to get rid of its excess speed, and go into a climb. In this climb, a bit too much speed is lost, and the ship noses down again, to repeat the process.



Flying is done largely with one's imagination! One's images of the airplane are correct, one's behavior in the airplane will quite naturally and effortlessly also be correct.

The pitfall of glide control: when doing the right thing, you get the wrong result first, the right result only later. Nosing the airplane up steepens the descent, but first causes a temporary ballooning. Nosing the airplane down shallows the descent, but first causes an extra sink. Be patient for a few seconds.

## Weather Flying

It's a good time. You don't fly in the sky, or in just air, you fly in the weather. This book takes you through what that means, how to recognize and know ahead what you're in for, how to handle it, what to avoid, and how to survive your mistakes. A good companion book to Langewiesche.

—SB

**Weather Flying**  
Robert N. Buck  
1970, 261 pp.

\$5.95 postpaid

from:  
McMillan Company  
B66 Third Ave.  
New York, N.Y. 10022  
or WHOLE EARTH CATALOG



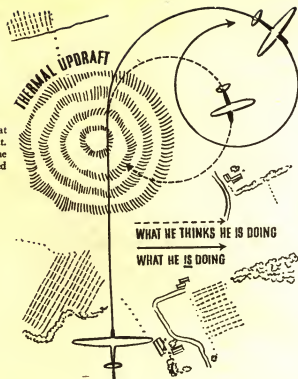
The nature of the brain is such that we see what we have seen before, and what we have a name for. We are blind to things which have not been properly introduced. People had fronts passing over for thousands of years, but nobody ever saw a front as front—i.e., as boundary between contrasting air masses. Then, 50 years ago, the Norwegians first recognized the cold front, described it, named it. Now everybody can plainly see many frontal passages every year. In this sense, some descriptive meteorology helps the pilot fly the weather.

Lowes that slow down are the nasties that really ruin a forecast. There isn't anything more difficult to figure out than a stalled front. If a cold front was supposed to go right through the East Coast but slows down and stops instead in the New York area, things go to pieces. Instead of clearing, the skies remain cloudy; wind hangs impishly around the southerly quadrant, getting over to southeast perhaps; and fog and low ceilings prevail. With such a situation a kink may develop on the stalled front, a wave form, and a new low pressure area move up along the coast following the stalled front's line and putting on a lot of weather.

If we summed up one weather rule it would always be: Have an out!



Fly above this kind of cloud. Beneath these cumulus it will be rough and uncomfortable; while on top the air will be clear, smooth, and cool.



As you approach the ground you must keep your vision relaxed and look all around; you must take in the whole scene, the perspective of the hangars on the side of the field and the other airplanes on the field, the parked automobiles, the trees, the telephone poles all around, the grass, the horizon; for it is from the perspective and apparent motion of such things that you will get a vivid perception of your height; and a staring eye will not see what matters. When you get tense, you will almost certainly stare; approaching the ground, most students do get tense; that is largely why the landing is so difficult for most beginners.

If an untutored person tries to fly an airplane and uses the controls in the manner that seems most 'natural' to him, responding most energetically and most quickly to those distances that 'naturally' impinge most sharply on his consciousness, the flight will almost certainly end in a spiral dive and a crash.

## The Air Almanac

Here's a book of pure data. If you need to know where sun, moon, planets, stars are, or where you are, this book is prime source. It is published quarterly 3 months. —SB

The Air Almanac  
\$37.95

\$7.75

from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D. C. 20540  
or  
His Majesty's Stationery Office  
49 High Holborn  
London W.C. 1

## Aeronautical Charts

Mark Taylor is a friend who has a fondness for the blank planes on other people's continents. He walks into them in his tennis shoes and makes friends with the chief and walks out and tells stories about how the main hazard in the jungle is dead-eye monkeys who shit on you from the trees. Mark says that often the only maps with information in the blanks are the ONCs—Operational Navigation Charts, available for 50 cents apiece. The Coast and Geodetic Survey Catalog of Aeronautical Charts has a map index for ONCs and sundry other flight maps and publications.

—SB

Catalog  
free

from:  
Distribution Division C-44  
Coast and Geodetic Survey  
Rockville, Md. 20852

296 Flying  
Nomadics

Now, here's why I'm writing, private aviation is beautifully compatible with the life style of WHOLE EARTH readers and not at all the straight, stussy thing many think it is.

You can get a good two passenger plane for under \$2,500, a good four passenger plane for under \$3,500. You can get 35 mpg and travel at more than 100 mph for about 5 cents a mile. You can be free as a bird, see the countryside as no sailing can, camp away from crowds and fuzz, be welcome on farmers' landing strips and even work on the farm for a while.

You can trade learning to fly for the instructor's use of your plane—and do the same flying-time-for-labor trade with a mechanic for maintenance. But maintenance isn't as high as generally supposed anyway. If you have a four passenger plane you can share expense with other couples and travel almost free since their covers gas, oil, food, etc. for the owners (the owners share maintenance, depreciation, insurance, tie-down—so it's really a fair for should I say fare), (sorry about that, it was pretty bad), bargain.

I have enclosed a copy of *Trade-A-Plane* (\$4.00 per year), and some aviation charts which show how many airports and landing strips there really are. I have marked some plane prices in *Trade-A-Plane* just to give you some idea of costs.

I can not here do justice to the truly far out places we've been—the deserted beaches where we've walked and slept naked in the sun, the rivers we've followed like footpaths only to land at their edge and camp when they turned to gold in the afternoon sun, nor the islands, idyllic and "dour" where we've floated and swum in water whose clarity was only surpassed by the crystal clear sky above us. We have encountered the scent of orange blossoms 1 1/2 mile over Florida at night and visited Mexican villages and out of the way towns no tourist chaperon to a Cadillac ever will see.

To come down, pilots are kindred souls welcome at flying farmers' landing strips. It's almost impossible to be more than 15 miles from a landing strip in the midwest—see Chicago chart). Most airport operators will lend you a car to go to the grocery store, and many airports keep several beat up VW's or similar cars around that you can use for no more than a couple of dollars placed in a cigar box in the glove compartment. Not long ago the operator at Lancaster, Pa. apologized for being out of cars and gave me the snow-plow to drive into town.

Quite apart from the bare bones super economy kind of mostly nomadic flying, one of the best buy planes for more settled and regularly working couples or singles is the early Cessna 172. A four passenger, all metal, 120 mph, tri-cycle gear plane, it can be bought for about \$5,000. On time payments that would be about \$500 down, \$100 a month. Maintenance is low and you travel 120 miles for 8 gallons of gas at .42 a gallon.

Don't be turned off by age of planes advertised, age really isn't a factor with a reasonably well maintained plane.

Peace,  
Don Biggs  
Arlington, VA.

## Private Pilot Study Guide

Of preparatory books for the FAA exam, this is the best. *Cram, pass, fly.*

—SB

### Private Pilot Study Guide

Larry Simonson

1970; 440 pp & map

\$9.00 postpaid

from:  
Aviation Book Company  
Box 4187  
Glendale, CA 91202

or WHOLE EARTH CATALOG

private  
pilot  
study  
guide

## Others

Other basic books recommended by Plane & Pilot Magazine:

- *The New Private Pilot Student Pilot Flight Manual*
- *Private Pilot Flight Manual*
- *Flight Maneuvers Manual*
- *Roll Around A Point*
- *Instrument Procedures and Techniques*
- *Airframe and Powerplant Mechanics*
- *Pilots Guide to an Airline Career*
- *Safety After Solo*

from *Beauty of Flight*, Manfred Curry, date unknown, John Day Company, out of print kindly loaned to us by Jay Bonner's father.



In light of what you state as your purpose (which I wholeheartedly endorse, I think you are way off base on a good part of your information on flying. 99% of all flying is directly government controlled, it's very big business, and demands and requires formal education and training. Modern flying has been described as long periods of boredom punctuated by moments of sheer panic; you knew what was going on in the cockpit as you circled in solid orange for a rush hour approach to Kennedy you'd never fly again. You haven't gotten far enough away from the crap yet in the CATALOG.

*Ty scoring.* The Schweizer's are the only major manufacturers of sailplanes in the US. All of their ships are very tough, and while very short of performance compared to modern glider ships, a lot of fun and an awful lot cheaper. The I-26, a classic sailplane, (Stunt Queen first one in "The Thomas Crown Affair") can be built from a kit for around \$2500.00. It will be worth more than you paid for it when finished.

I'm getting very hot on ballooning, but know nothing about it. Worth looking into.

*I suggest dropping the So You'd Like to Buy an Airplane and Used Plane Buying Guide. You only need two things to buy an airplane: a copy of "Trade-A-Plane" for current prices, and an A&E mechanic to check it out. All that crap about checking the fabric for wrinkles doesn't mean squat if the spars are rotten. The best places to look are the little grass filled fields and short strips around your home. There are invariably perfectly good 12 and 20 year old planes sitting around for \$2000-2500. Great fun and you can sell it a year later for what you paid for it.*

*Stick and Rudder definitely keep in. Indeed a classic; not a bit outdated and never will be. There are several flying magazines available. If you've read one you've read them all. ("How to make safe landings" NYNHEIMER turns out to be the same old rubbish about power and attitude). There is one exception: "Private Pilot." Relatively new, struggling I suspect, and very exciting. Also very nicely put together, from a technical and design point of view. I hope they make it.*

*Drop the B-1-K. It's not really a home-built in the "pure" sense, but a kit. It's not really a very good plane (no wing dihedral, i.e., lousy longitudinal stability, tiny tail, and flimsy gear). It's not really cheap either. It appeals to insurance underwriters who always wanted a few seats of their own to fly the kids and the missus up to the folks but never could afford it, and never finish it. It's a bummer really. Skip this one, your choice.*

## Permit address:

Private Pilot, Dept. PV5

3 West 57th St.

New York, N.Y. 10019

Schweitzer Aircraft Corp.

Box 147

Elmira, N.Y. 14902

The Soaring Society of America, Inc.

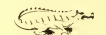
P.O. Box 60071

Los Angeles, CA 90066

I'm not sure sport flying can be saved anywhere in this country. I'm

not sure we can afford to save it in the light of the billions of things which need help more badly. But I would very much like to.

Sincerely,  
D.J. Clausen  
Thetford, Vermont



Mrs. Godey sighed. She wanted to commiserate with Mrs. Thornton about Charlene, and maybe pick up some late news on her in the process. But sorting the mail, as she had been, had given her such a headache the world was starting to spin before her eyes. She sat down on the bench facing Mrs. Thornton's chair, and appeared to go instantly to sleep. But in a little bit she opened her eyes and looked up at Mrs. Thornton and said, "Honey, I wonder if you'd do me a favor."

"Why sure," said Mrs. Thornton. "You just tell me what it is."

"Get me a B. C. out of the cooler, and some of them Goody Powders off the shelf. My poor old head feels like it's about to come apart."

Mrs. Thornton was a big woman and she had to struggle to get to her feet. She was sweating just sitting there and as she walked to the cooler Mrs. Godey invited her to help herself to a soft drink, on the house. Mrs. Thornton said she didn't think she wanted anything right then. But once she peered into the cooler and saw the bottles standing cold and luscious in the dark water she changed her mind and took out a Dr. Pepper for herself. She opened them and got a package of Goody's off the shelf.

"I don't know what I'd do without my Goody's," said Mrs. Godey as she fumbled with the wrapper. "Them and R. C.'s is about all that'll keep me going any more."

(continued)

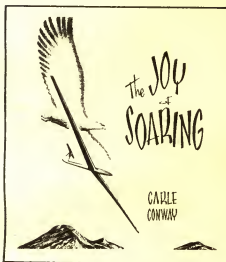


NET OF \$492.00 EACH.

## The Joy of Soaring

like a big bird  
quiet whoosh over the wings  
alone  
wheel  
circle  
lift,  
manual of instruction for glider flight

-jd



The Joy of Soaring  
Conroy and Parcell  
1969: 124pp.

\$5.75

from:  
Soaring Society of America  
Box 66071  
Los Angeles, California 90066  
or  
WHOLE EARTH CATALOG

## THE BASIC IDEA

The glider's angle of bank and pitch attitude should be fairly well under the pilot's control, and the glider should be equipped with a variometer, airspeed indicator and altimeter. Thus prepared, the pilot can try his hand at thermaling. When the variometer reads up, the pilot commences circling, keeping a sharp eye on the instruments, the attitude of the glider and the position of other traffic. After a full turn he will know at what point of his circle the lift was best and where it was weakest. Mentally, he draws a line through these points, and then moves his circle toward the stronger lift to improve his rate of climb. When the variometer shows a constant rate of climb for a full circle, the glider is perfectly centered in the lift, so the rate of climb is best. Oh happy day! (It seldom happens.)

## RELEASE POINT

GLIDER MAKES  
CLIMBING TURN  
TO THE  
RIGHT

TOWPLANE MAKES  
DESCENDING  
TURN TO THE  
LEFT



## Bat Glider Plans

Supplier: Quest Publishing Co.  
P.O. Box 7115  
Amarillo, Texas 79109

## Additional Information:

These are plans for a man carrying glider for soaring down from the heights. I know nothing about these particular plans yet, but the concept is quite sound. (I am a senior aerospace engineering student.) If the military doesn't find me, I will build one of these gliders and write an evaluation for you. To quote a review in March, 1970 *Sport Flying*:

How about a glider for a total outlay of about \$200 cash? Well, if this sounds like fun, you might try this simple hand glider. It goes together in hours and will supply hours of endless fun. All you need is some bamboo or aluminum tubes, reinforced plastic tape, some plastic sheeting, and a gentle slope with a tad of breeze. A quick flying lesson is incorporated on the plans. Sounds like a gas for the adventurous. *No flying certificate required.* [my italics]

This must be the grooviest way to get high since Harry Anslinger discovered grass. Hope you can use the tip.

Stephen L. Addington  
Austin, Texas

## Stits Aircraft Supplies

## Construction materials and supplies.

Stits Aircraft Supplies  
Box 3084  
Riverside, CA 92509

## SAFE FLIGHT PRE STALL WARNING SYSTEM

Warns by red light and horn 5 to 10 miles per hour before the stall occurs. Detector unit easily mounts on leading edge of wing and is actuated by a change in the flow of the air at the leading edge. Complete with installation instructions. Available in 12 or 24 volt; specify when ordering. List price \$68.00 per set. Sale price \$58.00 per set.



2024-T3 Mill Spec  
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Sheet Size

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.016	\$21.97
.020	26.26
.025	29.55
.032	36.51
.040	44.52

6061-T4 Mill Spec  
Q4-A-327 BAR, Used  
for welded fuel tanks,  
formed parts, ribs, etc.

Thickness	4' x 12'
.025	\$26.77
.032	32.55
.040	39.79

DISCOUNTS on all aluminum sheet - 10% off on a total of 6 or more & 15% off on 10 or more sheets. Sorry, we no longer cut aluminum sheet to remnant sizes.

## Soaring

A thoroughly useless sport, unless like Don Aitken you happen to be a passenger in a private plane flying over the barren Australian outback and the engine goes out and the pilot can't glide it well but you can, picking your way from thermal to thermal clear back to civilization. The magazine is nice for shopping.

Soaring  
Doug Lamont, ed.

\$13/yr (monthly)  
includes SSA membership

from:  
The Soaring Society of America  
Box 66071  
Los Angeles, CA 90066

Around 10:00 a.m. the first ship stayed aloft. By the time he was well into the second turn of a thermal, I knew it was late. Time for the sneaky rush to get the ship up to the tow line before too many people saw the light. By 10:45 I was aloft and sampling the 300-foot lift of the early thermals. The winds were all that had been promised. With thermals topping at 8000 mft (4700 feet above ground level), it would have been a chore to stay near the field. At the southeast end of the Minden Valley, Mount Siegel and surrounding ridges rise to about 9000 feet. I drifted that way and worked each thermal to its limit. Gradually, as the ground level rose, so did the thermal height, until it was possible to clear the hills and drop over into the next valley south. I sent my crew (wife Eunice and sons Bob and David) south on Highway 395 and immediately dropped below the ridge and lost direct radio contact. Chatter on 123.3 indicated lots of activity back at the field—all of it being directed to landing the gliders aloft because of an approaching dust storm and sharply increasing winds. It was obvious that I didn't want to return in that direction even if I could—much safer and a lot more time to outrun the front.



19-METER HP-14, N1051. Completely equipped. \$7300. Phone George Thomas, (714) 646-0248; or Ned Jacoby, (714) 673-4374, evenings.



BEAUTIFUL CHEROKEE II. Sell or trade for as little as \$625, \$833.33, \$1250 per share (1/3, 1/3, 1/3). (213) 388-7476.

## Ballooning

There's a magazine for balloonists:

Ballooning  
Deke Sonnenichsen, ed.

\$2/yr quarterly (\$3 foreign)

from:  
Ballooning  
Memo Oaks Balloon Field  
Memo Park, CA 94025

## J-2 Gyroplane

A local job to go with your Lear jet.

McClulloch Aircraft Corporation  
Box 1259  
Lake Havasu City, Arizona 86403



Mr. Thornton took a drink of Dr. Pepper.

"They say Joyce Jennings is taking tranquilizers now," she said. "They say since Billy Joe left she can't get any rest at all without taking one of them pills."

"I never knowed Billy Joe to get any rest even when Billy Joe was home," said Mrs. Godsey. "I never knowed her to be home any night of the week before one and two o'clock in the morning."

Mrs. Thornton sighed and dabbed her eyes again. "It's her poor old mother I feel sorry for. I decide but children is a trial. They're nothing but a burden to be borne."

Mrs. Godsey nodded. "About the only one I ever knowed that wasn't is my Leonard," she said.

"He's the exception all right," said Mrs. Thornton. Him and Roxie's both good. You're lucky to have them, Mrs. Godsey. You are, now."

Mrs. Godsey was having trouble taking the telephone off her package of Goody's. She'd been picking at it ever since Mrs. Thornton handed it to her, but her hands were so stiff and arthritic she hadn't made a tear in it yet.

"Honey, let me undo that for you," said Mrs. Thornton.

"Never mind," said Mrs. Godsey. "I may be old but I ain't plum helpless yet."

(continued)

Sky Sports **299**  
Nomadics





**National Outdoor Leadership School** trains teachers, instructors, and counselors for outdoor programs. They also accept people who want to learn skills for their own outings and expeditions as well as those who wish to gain an extended wilderness experience. They stress conservation and ecology during a five week summer course in Wyoming. The school is run by Paul Petzold, an outstanding mountaineer and outdoorsman, a Grand Teton Guide, and from all reports, a great person. Write directly to him for more information.

Paul Petzold  
National Outdoor Leadership School  
Lander, Wyoming 82520

#### River Trips

River running is both easy and exciting and usually takes you through wild and remote country. One of the best reasons for going on an organized river trip is that they take care of a lot of the hassle; they provide boats, life jackets, waterproof bags for your gear, etc., and get you back from the end of the river to where your car is. Otherwise you have to either find somebody who isn't making the trip with you, or hitchhike, but many rivers start in remote country where only a few cars a day travel.

**American River Touring Association** is one of the oldest operators of river tours. They are a non-profit organization which runs first class trips. ARTA uses special rubber rafts rowed by one of their guides on the Colorado and a lot of other rivers. Prices are reasonable, but you have to pay extra to have your car shuttled to the end of the river. Write for a brochure listing all the rivers they run or request a separate brochure for a specific river.

American River Touring Association  
1016 Jackson St.  
Oakland, California 94607

**Grand Canyon Dories** is the most unique of the many groups that run the Colorado. They use small wooden dories similar to the ones used by Powell on his first trip down the river. They provide air transportation back to your car.

Grand Canyon Dories  
P.O. Box 5585  
Stanford, California 94305

**Lute Jerstad Adventures** runs trips on several northwest rivers in six man rubber rafts that they teach you to row yourself. Transportation is provided from Portland, which overcomes the car shuttle hang over. Write for river trip information.

Lute Jerstad Adventures  
9920 SW Terwilliger Blvd.  
Portland, Oregon 97219

## Outdoor Schools and Trips

Wilderness trips require equipment, skill, and usually, someone to go with. The best way to get into the wilderness is to find a friend who has all these, and is willing to loan you equipment and to share his knowledge with you. The next best thing is to go with a group organized by a club or professional school, camp, or guide service. Groups are organized to do every conceivable thing in the wilderness, this approach is the most recommended. If you don't know people who have the skills necessary for what you want to do in the outdoors, going on a group trip will provide them and give you the opportunity to get together a few people and go off on your own the next time. Aside from not being much alone, some wilderness activities are pretty dangerous if you do them alone.

The organization that runs the trip will usually handle a lot of the equipment and transportation problems, this can be important, particularly on long trips, foreign trips, or on trips where a lot of gear is involved. The outdoor schools also do a great job of teaching you how to cope with outdoor problems, and may push you to do something you had never thought yourself capable of doing. You will develop the skill and confidence necessary to put together your own trips.

Schools and group trips have their drawbacks, too. Most disastrous is the realization that it is usually necessary when a group of people do something together, you are not completely free to set your own schedule and to go where you want to go. You should weigh this against the advantages before you go along on any trip. Be sure that you are ready to commit yourself to going along with whatever the group does. It can be difficult and dangerous to split from the rest of the group in the middle of the wilderness. You will probably find, though, that you have a lot more freedom than you may have imagined.

The cost of a trip may range from nothing to a sizeable amount of money, depending mostly on the amount and quality of the instruction you get. Some schools, particularly the "character building" ones, have scholarships available.

Another problem caused by organized trips is the rape of the wilderness caused by hundreds of people using it. If you organize your own trip, keep the group small.

#### Mountaineering

There is a lot of climbing schools and guide services, each one specializing in techniques applicable to their local mountains. They're expensive at first glance, but they supply a lot of equipment, and you won't be there, and live you excellent instruction and a healthy outlook towards the sport. Mountaineering often presents the only way to get away from people, most wilderness valleys are over-crowded at the summits, getting that way, too, but more slowly. Unless you know someone who has a lot of experience, you should probably get some professional training. As a general rule, climbing schools are better than guided climbs, since guided climbs tend to be oriented to just hauling people up a mountain rather than to encouraging them to learn how to lead the party themselves. The schools listed below are oriented to developing understanding as well as skills.

#### California:

**Rockcraft** is a school run by Royal Robbins, one of the Yosemite rock climbing pioneers. The school is located near Lake Tahoe away from the crowds and hassles of Yosemite. He teaches big wall rock climbing techniques, but won't let you put in a whole route with both bolts. You can get a fine in Yosemite for cutting down trees; why should drilling a hole in the rock be any different? Write for a brochure.

Rockcraft  
906 Durant Street  
Modesto, Calif. 95350

#### Northern:

**Mt. Hood Mountain School of Mountaineering** runs the most comprehensive program around. The school is run by Lute Jerstad, who climbed Mt. Everest in 1963, and also has Tenzing Norgay, the Sherpa who made the first ascent of Everest in 1953 on its staff. They run ice climbing seminars, rock climbing schools (instructed by Tom Frost, another Yosemite climber), and climbing excursions which climb 3 peaks in a week. Write to:

Lute Jerstad Adventures  
9920 SW Terwilliger Blvd  
Portland, Oregon 97219

#### Wyoming:

**Jackton Hole Mountain Guides** has a program of guided climbs and instructional camps in the Teton mountains. They have literature describing both their programs and philosophy of mountaineering.

Jackton Hole Mountain Guides  
Teton Village  
Wyoming 83025

#### Personal Trips or Charter Building

There are a number of organizations which make use of the unfamiliar situations encountered in the wilderness to build character. It's really a great approach if you are into that sort of thing. If you go on one of these schools, you will learn to feel at home in the outdoors and will have the confidence that you can survive in whatever situation you find yourself. **Outward Bound** runs programs at five locations throughout the U.S. Their concept is that you can and should learn to rise to an emergency situation, to stop often place you in a "sink or swim" position. They assume that you have no previous experience, yet by the time you complete the course you will have developed enough skill to spend several days alone in the wilderness. The programs are expensive, but the results are incredible. The thing you should be aware of is that they have a tendency to treat the outdoors as a foe to be conquered rather than a friend to be loved with, this is a very different concept from most of the other outdoor programs. A really turned on brochure describing all of their programs is available from:

Dartmouth Outward Bound Center  
Box 50  
Hanover, New Hampshire

#### Bicycling

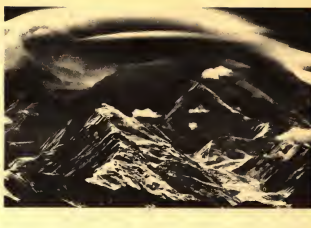
You probably won't get too far into the wilderness on a bicycle, but you can make incredible distances on one and still be outdoors and not cause pollution. Several clubs run bicycle tours through all sorts of country; they are fun and are a good way to "bag a virgin", a car that carries all the baggage, which saves a lot of effort. Write to:

International Bicycle Touring Society  
946 Prospect Street  
La Jolla, Calif. 92037

#### or

League of American Wheelmen (LAW)  
5118 Foster Ave.  
Chicago, Ill. 60630

Photo: Mountain Photo



**Backpacking** *The Complete Walker*, rent a pack and a sleeping bag, and go do it! Organized backpack trips are one of the major causes of deterioration of many wilderness areas. The Boy Scouts run an unbelievable number of trips, many outdoor clubs run frequent trips with 10 to 50 people in a group. Backpacking is really an opportunity to find solitude and wilderness; don't destroy that experience for yourself and others by marching up a trail with a crowd. One of the largest conservation organizations that their outings not be publicized because the impact on the environment from the trips they run is becoming critical, and they would prefer that no more people attend them.

#### Foreign Trips

There is a lot of wilderness outside of the United States, some of it virtually unexplored. Many groups run expeditions and wilderness outings to such places as the South American jungles, the Andes, Alaska, Iceland, Antarctica, and the Himalayas. Two major problems occur on a wilderness trip in a foreign country: logistics are incredible—if you don't have experience, you can get really hung up in problems of customs, transportation to remote areas, language, hiring locals to carry your gear, and finding food; the other problem is that you may be traveling in primitive areas where you have to be careful not to destroy the area for both the local and the next traveler. Many places operate on a subsistence level economy; they don't have spare food and they expect you to spend most of their time raising their own food. If you hire somebody at an outrageous salary, or pay \$5 for a 10d item, you have blown the whole economy all to hell. Try to make arrangements for food and be as self sufficient as possible, leave your culture and economy at home. One way to be self sufficient is to travel with a group which makes all the arrangements for you.

**Mountain Travel** is one of the largest organizers of foreign wilderness trips. They have a catalog which lists more than 25 trips and expeditions to incredible places all over the world. Their prices are really inexpensive—usually about 20-25 dollars per day plus airfare. One way they keep prices low is by not paying their leaders a salary, they just come along for free! so they sometimes get non-professional leaders. They take care of all of the details overseas, but pre-trip information assumes that you have a lot of previous experience. Free catalog from Mountain Travel (USA).

6201 Medua Place  
Oakland, California 94611.

**Lute Jerstad Adventures** runs climbing expeditions, and is getting into running trips to the Mt. Everest base camp and throughout the Himalayas. All trips are lead by a professional mountain guide with Tenzing Norgay accompanying the Himalayan treks; this provides an opportunity to get acquainted with the local culture, particularly in the region of Tibetan Buddhist influence near Mt. Everest where Tenzing was born. Trips are a little more expensive than Mountain Travel's, primarily because of the leadership; pre-trip information includes a lot of cultural background and detailed information on what to expect on the trip. Write for trip information to:

Lute Jerstad Adventures  
9920 SW Terwilliger Blvd.  
Portland, Oregon 97219

—Stan Armitage  
Lute Jerstad Adventures



The ladies hushed talking until Mrs. Godsey got the wrapper off the package. There were four doses in it, each folded in a paper. Mrs. Godsey took out a dose, held the box steady, and very carefully, she poured the white powder into her R. C. Cola.

"I use to just clump it out on my tongue," said Mrs. Godsey. "But here lately it gags me to do that, so I just mix it in a dose now, and sort of sip on it as I go along. I think it's better that way. Seems to stay with me longer."

"When I was in the hospital they fed me through the veins," said Mrs. Thornton. "I've done over three weeks and never got a bite to eat. I hated it. I've come and told Whipple he never to expect to ever take me to a hospital again. I told him I'd as soon pass out right there at the house as put up with that outfit over in town."

"It just licks you, honey," said Mrs. Godsey. "I've got terrible things wrong with me, but I ain't about to go to no hospital for them. I told Leonard if I get down sick to just prop me up in bed, give me some sassafras tea and let the Lord take care of the rest."

"Amen to that," said Mrs. Thornton. "The Lord's better'n any doctor I ever had anything to do with."



Sid Shaahy, London, England

## Cheap Travel

Two undisputed but helpful books on international travel at low cost.

—SB

[Suggested by Nancy Schimmel]

Icelandic Airlines has been the pioneer of low-cost, Trans-Atlantic air transportation. Since 1952 Icelandic (Lofthafin) in the Icelandic language has consistently offered the lowest fares of any regularly scheduled airline between the U.S.A. and Europe.

... I feel Icelandic's regular round-trip New York-Luxembourg fare of \$319 offered from August 4 through May 31 (to Europe) and September 26 to July 21 (returning) is a remarkable bargain and one of the best buys available anywhere. This is a bargain it's good for a year with no minimum stay or weekend restrictions.

### Air Travel Bargains

## How to Travel Without Being Rich

Norman D. Ford

1969; 179 pp.

\$2.50 postpaid

from:  
Grosset & Dunlap, Inc.  
51 Madison Avenue  
New York, N.Y. 10010

or WHOLE EARTH CATALOG

### Air Travel Bargains

Jim Woodman  
1970; 320 pp.

\$2.95 postpaid

from:  
Simon & Schuster, Inc.  
630 Fifth Avenue  
New York, N.Y. 10020

or WHOLE EARTH CATALOG



Rule: the travel value of any fare is determined by the number and variety of places and can visit all Africa extra cost en route to your destination. The more indirect and round-about your route, the greater value you receive from any fare.

## How to Travel Without Being Rich

London—istanbul: Direct Orient Express	
Istanbul—Ankara: Taurus Express	
Ankara—Erzurum, Turkey: local train	
Erzurum—Tehran, Iran: TBT or Mihanotous bus	
Tehran—Meshed, Iran: rail	12
Meshed—Yousouf Abad, Iran: bus	1
Yousouf Abad—Herat, Afghanistan: Afghan Mail bus service	4
Herat—Kandahar—Kabul, Afghanistan: Afghan Mail bus service	4
Kabul—Peshawar, Pakistan: Afghan Mail bus service	4
Peshawar—Lahore, Pakistan: express bus	2.50
Lahore—Ferozepur, India: local bus	1
Ferozepur—New Delhi, India: Punjab Mail train	6.50 first class
New Delhi—Calcutta, India: Toofan Express train	13.35 first class
Calcutta—Madras, India: Howrah—Madras mail train	15.20 first class
Madras—Penang, Malaysia: B.I. Line or Shipping Corp. of India	14
Penang—Bangkok, Thailand: International Express train	25 second class
Bangkok—Kobe, Japan: Messageries Maritimes Line	155 tourist class
Kobe—Tokyo, Japan: Kodama Express train	8 second class
Total: London to Tokyo	\$417.55

### Air India Boeing 707



The new Japan Air Lines \$400 round-trip Bulk Inclusive Tour fare from the U.S. West Coast to Tokyo is an incredible bargain. There will be some real money saving tours to Expo '70 based on this fare.

### Air Travel Bargains

## Shipping Out

Reply to a letter in the March issue in the "Other People's Mail" section, p. 22.

P.G. asks "Who's got the Straight Skinny?" concerning shipping out on merchant ships.

Firstly—get your passport and have your occupation listed as Merchant sailor (or seaman).

Second—to ship out on U.S. vessels you need a Coast Guard document which is a plastic I.D. pass with your photo and a "Z" number. You can only obtain this pass from Coast Guard Merchant Marine Documentation Offices in all major seaports. Look in the phone book under U.S. Government.

Third—here is the hangup! The Coast Guard won't issue new documents to anyone unless they can prove that they have a job. Acceptable proof usually consists of a letter written by the personnel manager of the company who will hire you. Most companies won't hire you without you already having the required document. I include maritime unions in with companies as they, these days, are trying to limit union membership.

Fourth—your chances of shipping out on U.S. vessels are quite slim. Many people were hired to man the ships that ran to Vietnam and the Far East hauling war or war-related cargo during the last five years. Now they are reducing the war effort and many sailors will be out of work as the government lays up ships.

Fifth—to hire out on U.S. vessels your best bet is to pester the hell out of the maritime unions—

Sailors Union of the Pacific—Seattle, Portland, S.F., L.A. (Wilmington)

Sea Fares International Union—East Coast & Gulf Ports

National Maritime Union—East Coast & Gulf Ports.

Also try tugboat companies—they hire a lot of men and pay very well. Your best bet is to play a "straight" roll. Most personnel managers and Union dispatchers are straight and anti-union and do not also appear straight. Having got the job and the required C.G. documents and entered into the seafaring life you will find that sailors don't give a damn what you look like, or how you act.

Sixth and last—shipping out on foreign vessels is a matter of chance. Contact the consuls of each maritime nation—Norway, Denmark, Sweden, Italy, Germany, Poland, Panama, Liberia, Greece—in each major port city of the U.S. leaving your name, address, and phone number.

Also go to a seaport and go aboard foreign ships and ask for a job.

Also contact Steamship agents (phone book again) and drop a card to the operators manager with name and phone number.

Kevin Mercar  
Seattle, WA

## How To Get A Job Overseas

Most of the openings are pretty imperialistic if your conscience is sensitive to that score. The book does cover the field okay. Mainly it comes down to this, if you have a needed skill like nursing, metallurgy, veterinary) the door is open. Otherwise you're welcome to either spend or starve but not compete with local labor.

—SB

## How to Get A Job Overseas

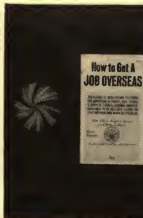
Curtis Casewit

1970; 253 pp.

\$1.45 postpaid

from:  
Arc Books Inc.  
219 Park Ave. S.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



The agency likes to get you while you're young, but older people with special backgrounds in the sciences and technology—have made the grade, too. If you're now a highly regarded cartographer, mathematician, anthropologist, or engineer, you can also ask for application prior appointment to 1820 N. Fort Meyer Drive, Arlington, Virginia. CIA draws its staff from many racial and ethnic backgrounds, which expect to earn as much as you would in private industry. Salaries start at a low \$3,895, and go up—in rare cases—to a limit of \$25,044 a year.

## Michelin Maps and Guides

If you're gadding about Europe or Africa these are the standard maps (\$ .75-\$1.50) and guides (\$3-\$4.50). —SB

[Suggested by Joe Godwin]

### Catalogs

free

from:  
Michelin Tire Corporation  
2500 Marcus Ave.  
Lake Success, N.Y. 11040



## Reference Guide for Travelers

If you're going to some particular place in the world and want to know about the guide books etc. for that place, go to a library and find this excellent annotated bibliography of all travel books in print.

—SB

## Reference Guide for Travelers

J. A. Neal

1969; 674 pp.

free at sensible libraries everywhere



"What people don't understand is that you've got to trust the Lord before He can do any good," said Mrs. Godsey.

"But people ain't willing to do that any more," said Mrs. Thornton. "That's what's wrong with the world."

"Let every soul be subject unto the higher powers!" Mrs. Godsey quoted. "For there is no power but of God: the powers that be are ordained of God. That's scripture, sister. Romans thirteen, one."

"People just won't accept it," said Mrs. Thornton. "People just turns away."

"They turn away from God and toward Satan," said Mrs. Godsey. "Old Satan's got a arm-look right around ever one of their necks."

"That's the pure truth," said Mrs. Thornton. "That's the pure truth if it was ever told."

After a little pause for a sip of their drinks, Mrs. Thornton said, "But you know, Mrs. Godsey, if there is anybody that ought to be in a hospital it's that surly poor old Emmitt Collier. I think it's just pitiful, him a laying up there on that old hillside by himself. Me and Wheeler was talking about him just yesterday, wondering what anybody could do."

"Why honey," said Mrs. Godsey. "You're behind the times." Mrs. Thornton's face said what do you mean?

"Emmitt ain't by himself no more."

"You don't mean he's died?" gasped Mrs. Thornton.

Mrs. Godsey grinned. "Oh no," she said. "His nephew David come in and gone up there to stay with him. Drove in from Cincinnati yesterday in the painted-up old bus of his thing you ever saw. Went right straight on up there to take care of him."

"Well I'll swear," said Mrs. Thornton.



## Peace Corps

We've got fine vacation news for suburban guerrillas, or for that matter, anybody up for a trip. Make Peace Corps your local travel agency at no expense to you.

If you want some time to think, adequate salary, easy and fun job, free medical care, free dental care, many profusely illustrated publications, and other gratuities, take advantage of the free offer. The U.S. government can be penetrated "like cheese-cloth." It's full of holes to breathe through.

Chances of acceptance are high, especially for people who can make things grow. If you can't make things grow you probably qualify as an English teacher. The more underdeveloped the country, the more loosely defined the job. If you want to make a big deal out of what you find yourself doing you can, but if you're not that type then let the Peace Corps be your reality trip. You might end up with a Maharihi in your own neighborhood.

Training usually amounts to a 6-10 week commune. Our program trained on a ranch near Rocky Mountain National Park—an instant plastic commune with coop general store, nightly dancing, feasting together, mountain climbing, even our own mythology. We also learned a foreign language. The same kind of language course we got would cost a couple thou at Berlitz. Other training programs have taken place in Mexico, Canada, the Virgin Islands, and all over California. The trend in Peace Corps training programs today is to choose a salubrious place where volunteers will feel a sense of oneness.

Peace Corps employs thousands of volunteers in countries all over the world—Morocco, Afghanistan, Nepal, Micronesia, India, Peru, Sierra Leone, and other places you might like to know. It's usually no problem enjoying the better aspects of the natives and retaining what you are at the same time. If you don't dig the natives you can work along with them anyway.

Peace Corps volunteers get two days of paid vacation for every month of service. That means 48 days accumulated vacation for two years of service. During vacation you get nine dollars a day just to subsist on. One volunteer visited five countries his first year of service—Spain, Tunisia, Sicily, Italy, and Greece, spending no less than two weeks in one country. A skillful volunteer could easily beat that. Counting local holidays, Christmas vacation, summer vacation, spring vacation, and unexpected surprises like International Moon Day or a sudden coup, a volunteer could easily push five months in days-off during a single year.

Despite recession in the states Peace Corps salaries have been going up recently. In less than a year's time our salaries have increased by 33%. With our excess subsistence allowance we've bought a lot of hand-made rugs and blankets worth thousands in the states if you need retirement money.

The necessary information is available through Peace Corps, Washington. When you read Peace Corps material, use your imagination. Don't be turned off by jargon like "volunteer spirit" and "effectiveness." In most countries lack of communications make bureaucracy virtually impossible. You are necessarily left alone. Improvise. Take a stereo and plenty of books you've been wanting to read. If the Peace Corps charts an airplane to fly your program to its site, there is practically no limit on baggage weight.

Regardless of when you leave the Peace Corps you get 75 dollars for every month of service abroad or about 1500 dollars after two years, plus free air fare back to your suburban camp. The Peace Corps will even find you another job.

And the whole two years is a free-ride period. If for any reason you don't like what you're doing, Peace Corps will pay your way home at any time.

Write Peace Corps in Washington and ask for a hand-book. Ask for special information on the country of your choice. Inquire about training programs and fields open to volunteers. Everything is free of charge. The whole trip costs you nothing.

Quotations from Peace Corps literature:

The change in attitude many Volunteers have after the initial novelty of living abroad has worn off is sometimes striking. The fire of enthusiasm they brought with them turns to ashes and they after they encounter the first misunderstanding, the first reluctance to change traditions based on the heritage of generations. Instead of attempting to affect the attitudes around them, however slightly, they begin in some respects to adopt these attitudes.

Going from the ordered routine of training to an unstructured job overseas has sometimes been compared to running off the end of a pier. Suddenly there is no solid footing underneath; often there is not a staff member or an instructor in sight, and it's up to you to sink or swim.

The work of a volunteer is largely a matter of individual definition.

**Emergencies:** The best advice here is to use your common sense.

Neither volunteers nor staff members may pilot aircraft during their service with the Peace Corps.

Mobius Polymers United,  
Tunis, Tunisia

## Knapsacking Abroad

The quickest way to get to know the local folk is to let them help you, like giving you a ride or a place to camp. This is a practical collection of basic lore.

—SB

Knapsacking Abroad  
Herb and Judy Klingner  
1967, 95 pp.

### OUT OF PRINT

Stackpole Books  
Camden & Keiser Bks.  
Harrisburg, PA 17105

Small gifts say more than "thank you" to someone who's helped you along your way. Ingenious traders also manage to subsidize their travels by importing reasonable quantities of locally scarce personal goods for distribution in non-industrial countries. Gifts and goods needn't all be hauled from home. Duty-free shops at ports of exit, or free ports en route, invite bargain purchases as well as personal restocking.

Premium items vary with country and times. Likely to continue popular in major blocs of the world are: Kennedy half-dollars, U.S. jazz records, unusual flower seeds, nylon shirts and stockings, instant coffee, transistorized equipment, watches, cameras, liquor, lipsticks, ballpoint pens, and photos of yourself and family.



## Student Railpass

I have just read your Fall catalog and I noticed that you didn't have anything about the greater bargain in traveling in Europe, the Student Railpass. For \$125 you can ride 2nd class for 2 months on the railroads in 13 countries.

If you wish to see some more evidence of this bargain read the August 14, 1970 edition of Life Magazine.

Thanks,  
Jay Butler  
Pomona, IL

2 months/\$125  
Talk to a local travel agent

## Youth Hostel Pass

The Youth hostel pass costs from \$2 to \$50, depending upon age and number in the group. It is required when staying at most of the European and American Youth hostels. The hostels in Europe generally charge from \$150 on down per night per bed and often offer either the use of a kitchen or very cheap meals. If you plan to visit any of the bigger cities (Copenhagen, Stockholm, Amsterdam, etc.) you should receive a couple of weeks ahead of time. When you buy your card you should also buy the guide for the area you intend to visit. They offer a fairly complete listing and rating of youth hostels, and tell how to get to them via public transport in the larger cities. You do not have to sleep in a hostel to eat, wash, laund, etc. There. Also it is a good place to use as a mailing address. I used the youth hostels in northern Europe and noticed that while families often stayed at the summer. As I mentioned many schools into hostels during the summer. As I have written above hostels are very cheap. I stayed at the Laem-bourgh hostel and paid \$1.25 for breakfast, supper and bed. I could have paid more and gotten a packed lunch. The German hostels charge two marks a night or 60¢ but are very strict but clean. For more information write:

American Youth Hostels Inc.  
20 West 17th Street  
New York, N.Y. 10011

I am a member of the Potomac Area Council and they have lots of ecology oriented outings.

Leon Dubman  
Baltimore, Maryland

P.S. Travel light and swift.

## Visit USA

Another overseas bonus. "Visit USA" airline tickets. Even if you're an American citizen, as long as you reside in some place outside the U.S., you're eligible. The \$150, 31-day deal does it best—on the feeder airlines. Forget those big promotional jobs on the trunk lines. The feeders are good and cover more ground. Since the ticket must be started within 30 days from your arrival in the U.S., get two of them and get 42 days of bombing-around for \$100. There are no kinkies or anti-double-back gimmicks. When you get tired, jump on the longest flight you can find. When you're hungry, look for one with a meal coming up soon. A big bonus—at or just near year-end, Alaska Airlines was in the deal. So my kids and I flew from NYC to Nome, Alaska and back for \$300 (kids are half fare until the age of 20 or 21). We even made a side trip from Seattle to Portland and back to buy cigarettes—they're cheaper in Oregon.

Peter Schermerhorn  
Amberg  
Netherlands Antilles

## Vagabonding in Europe and North Africa

Good specific low-rent information.

—SB

## Vagabonding in Europe and North Africa

Ed Barry  
1971, 225 pp.

\$2.95 postpaid

from:  
Bookworks  
c/o Random House  
Westminster, Maryland 21157

or WHOLE EARTH CATALOG

P-R-O-V-O-Y-A is a number you dial in Paris if you want a ride out of town bound for anywhere in Europe. This is an organization that arranges rides for hitchhikers for a \$2 registration fee. Get details from: Provoya, 16 rue de Provence, Paris 9e. I've heard of this several times but haven't used it and don't know anyone else who has. Anybody?

Drivers pick you up because they want something from you. Short list of wants:

- 1) They're bored—you're to entertain them or vice versa;
- 2) They're curious—you're to provide information about something, usually yourself;
- 3) They want to feel charitable—you're the chosen recipient;
- 4) They need something tangible—you're to share expenses or help drive, etc.

Europe This Way by James Stettensen Jr. and Lawrence Handal (Athens, \$7.95). New edition each year. Never mind that it's intended for students—ETW is the best all-around guidebook I've seen. The cost is high and the book is bulky, but both those disadvantages result from one considerable advantage: it is packed with information. More of it on more countries than any other guidebook, and particularly important, the information is all useful and sensible. It covers trip preparation, working or studying abroad, transportation, food, lodging, entertainment, and the advice given by the authors is consistently excellent. Its country-by-country listings are the best available between one set of covers. If you get it, consider traveling it apart to carry only the pages you need. It's too bulky to carry whole.

## Hitchhiking, the homilies:

Use a sign. Have a map.

Look like who you want to pick you up.

Wait where it's easy for drivers to see you and stop.

Be of use to the driver, or at least no bother.

Don't take it personally when they don't pick you up. See it as their problem.

Stay on the curb, and off freeways. Don't rob or murder anybody; it makes it hard for the next guy.

—SB

## Travelers Directory



## Travelers Directory

Since 1940, the Travelers Directory has been the most comprehensive and up-to-date source of information for travelers.

Travelers' Directory is the international registry of hip travelers who enjoy meeting others everywhere, whether around the corner or around the world. The book lists their names, addresses, telephone, ages, interests, and offers of hospitality to other travelers passing through. The upcoming 1977 edition will list almost 1000 addresses in its 76 pages. New listings are now being accepted in Directory headquarters in New York City. EQUALITY readers are especially welcome, because they obviously share common interests with those already listed.

Prospective listees should submit the above information about themselves for publication in the Spring edition. (Published annually since 1960, Travelers' Directory is now being published every six months to keep pace with its rapid growth.) As always, copies of the new edition will be sent only to those whose listings are accepted. So only listees will know who else is listed. No extra copies are ever printed, so none is available to anyone not listed. Each copy of Travelers' Directory is numbered, bears the listee's name, is neither transferred nor resold, and is destroyed when each listee's "underground passport" to identify him to all the others in the book.

Ever since its first edition ten years ago, Travelers' Directory has been a nonprofit labor of love. The costs of printing and mailing the Directory are shared by the editor and all the listees. Each listing is submitted with a donation of at least U.S. \$3 (about \$200) to defray some of the production expenses of the editor, who receives no remuneration at all. Donations may be sent in any currency, or by check. The edition made out to Travelers' Directory. Listings arriving by 28 February will be included in the Spring edition, to be sent to all listees in March, in plenty of time to make plans for summer traveling.

Even before the new edition of the Directory is published, listees will start receiving the Directory's magazine, *Trips*, as a free bonus. This amusing publication is written by and for the listees themselves. It features articles on their travel experiences, invitations to all listees for free weekend Directory parties in different cities, and solid advice on such subjects as hitching free rides on planes and ships, or which companies will pay you to drive their customers' cars across the country.

Such homes, though, are incidental to the primary purpose of Travelers' Directory. People decide to be listed mainly because they want to meet others who share their interests wherever they travel. They know they have friends to welcome them in each city in the world where there are Directory listees, and that seems to be just about everywhere: London, Paris, Frankfurt, Rome, Tokyo, Sydney, you name it. Listees live in almost every major country on every continent, in such intriguing areas as Antarctica and Viet Nam. One listee recently toured much of Africa, staying with other listees in Tanzania, Liberia, Somalia, Botsswana, Senegal, Morocco and the Canary Islands. The country he represented in the United States, with hundreds of listings, ranging from one to 55 addresses in each city. Although listees collectively speak almost every language, English, the international language used throughout the Directory. No listee ever visits anyone, of course, without first phoning or writing to be sure he's welcome.

Because each listee must submit his listing himself, he knows he wants it published in the next edition, all addresses and offers of hospitality to compatible listees are current. The listing is ever carried over to the next edition automatically. Despite that policy, many current listees have managed to be listed in every edition since 1967. Travelers' Directory can't be all bad. Welcome aboard.

P. Kacalano, Editor, Travelers' Directory, 51-02 33rd Ave., Woodside, New York 11377



"His bus is out behind the house right now."

"Well I'll swear. Now what nephew would do be, honey? It ain't Jenny's boy."

"Jenny's boy'd be too young, honey. He's Royce's. You remember Royce."

"Got killed in a car wreck," said Mrs. Thornton. "That's right. It was his woman Eve that took up with that Davenport everybody heard he had."

"Why yes. I remember that family. They went to school to my brother-in-law's wife Rose, when she taught over yonder at Hemlock."

"That's Marcella," said Mrs. Godsey.

"Well now," said Mrs. Thornton. "I remember Marcella real good, but I ain't never seen her boy." "He's nearly grown now," said Mrs. Godsey. "I wouldn't recognize him if he hadn't told me who he was. You'd think he was one of them hip-boys on television, to look at him. Kind of queer-acting but I tell you now. That child sure has natural abilities about taking care of his uncle. I called up there to Cincinnati Sunday to say how sick Emmet was, and he answered and said he'd come as soon as he could. Just like that. Stopped in here a few minutes, then took off up that creek lickety-split. His bus is out behind the house right now. Leonard pushed it around there."

Mrs. Godsey took a sip of her R. C.

"I tell you now, honey, she was on. I've been praying for Emmet. I've been asking a blessing for him ever since he come down sick, and I declare if he don't look like the Lord's done sent him one."

"I hope it's so," said Mrs. Thornton. "I say God bless the boy if he don't do no more than make Emmet feel like somebody cares a little something about him."

"That's right. It was his woman Rose, and she started to get up then. Struggling to rise, she said, 'Well young'un, I don't mean to run you off, but it's my nap time, and I'm going to go in yonder and lay down in bed for a while.'"

"I don't blame you," said Mrs. Thornton, and she started getting up too. "I've got to get on home myself. Wheeler'll probably kill me if I'm being long to work out."

Mrs. Thornton was as at Mrs. Godsey was old, and it took them quite a long time to get out of their seats and stand. When they'd made it, Mrs. Godsey said, "You come back to see me, now, by and by."

"I will," said Mrs. Thornton. "And you come up and see us some time."

"Oh, I don't know," said Mrs. Godsey. "I guess I'm too old to be gettin' about."

Mrs. Thornton said, "Pssh. You tell that Leonard I said for him to load up in the back of that truck of his and haul you up to our house for dinner next Sunday."

Mrs. Godsey laughed and said she'd tell him. "Where's Leonard at, anyhow?" said Mrs. Thornton. "I've been wanting to ask him something."

"I don't know what he's at today," said Mrs. Godsey. "But he's on the Grand Jury next week."

"The Grand Jury?" exclaimed Mrs. Thornton.

"Yep. Two weeks at it, starting Monday."

"Lorcy," said Mrs. Thornton. "He'll come back thinking he's a big shot."

The women laughed again and waved as Mrs. Godsey went through the curtain that separated her house from the store. Mrs. Thornton picked up the empty soft drink bottles, put them in a basket beside the cooler, and then went out the door.

## Temporary Car

Re: Survival Travel Suggestions

If you have a little bread, a good way to move from city to city is by driving a car for an **Auto Transport Agency**. In most big cities there are usually a number of agencies. Call up and ask if they need any cars driven near to where you want to go. If they say yes, try to get their office to fill out an application. Requirements are generally, but not necessarily, 25 years of age or over, some references, a valid driver's license, and supplementary identification. They will ask how many miles are driving with you. Depending on the rates you can either tell them or say that you are driving alone. I don't know if there are any insurance considerations in this respect.)

Usually they require a deposit of \$40 to \$50. At the end of the trip you are reimbursed for the deposit, any **allowance**, permit fees, and repair expenses you might have incurred on the road—if they were not the result of negligence. Be sure to keep your receipts. It pays to shop around. Often one car will have a larger gas allowance. Also, if you are low on cash, you want to get a car which is less likely to break down, or one that uses less gas. Rattle traps usually mean trouble. Waiting a couple of days and checking regularly with the agencies will often turn up a car.

About five western states have a commercial vehicle tax which you are required to pay upon crossing the state line. If you are stopped and do not have a sticker you are liable for a large fine. If you obey all the laws and stop to 25 when passing through the small towns, the chance of being stopped if you are driving a car is very slight. Worse odds if driving a truck, van, or obvious commercial vehicle (if a larger gas allowance for these—dicker a little, they are usually more expensive. I keep my agency sticker in my pocket. If stopped, take a hard look story are corroborated.)

Should you run out of cash money before, you can telephone collect to destination and have cash wired to you as a deduction from your deposit. Another angle is to check the Greyhound bus Stations and see if someone could help pay for your gas. This will usually save them cost of half a ticket. Watch out you don't get picked up for soliciting. Plan ahead.

Peace and good luck,

Arn  
Sherman Oaks, Calif.

## Cheap Meal in a Strange Place

Landing in a strange city with very little bread is rough; rougher even than *living* in one with very little bread. Eating is always important and should not be put off for too long in any circumstances. I may have a rung for your ladder. A good meal can be had in any hospital cafeteria in the land for from 60 cents to one dollar. Meat or fish, vegetable, salad, milk and dessert at 1/3 the price of any restaurant. No one cares what you look like either, they assume that you're a visitor and leave you alone. More than you might be invited into a friendly conversation since people in hospitals share a common bond.

If you are looking for a good spot to eat in San Francisco, I recommend St. Mary's Hospital on Hayes and Stanyan—excellent. \*\*\*

Dana McMill  
San Francisco, Ca. 94133

## Canadian Rail Cheep

I have a couple of suggestions which I hope you can use. (You probably know about this one). You can travel on the Pacific Railroad from Montreal to Vancouver for \$51.00 Canadian or \$40.00 (American), coach, no meals. (For three days—who you care). I really didn't believe this so I wrote the company and it was verified. That is so incredibly cheap & what a trip, through the Canadian Rockies, etc. Right now some friends are travelling this train and I'm dying to hear how it goes.

Love & Peace—

Margaret Cherry  
Providence, R.I.

## Freight Hitchhiking

You do ask by hitchhiking but hardly a mention of *freight hopping*. In the U.S., this is technically illegal, but in many areas, particularly in the west, it is allowed in order to have cheap labor available for the big farmers. For example, you can catch a ride from Seattle to Interbay to Minneapolis or to Chicago on a freight train respectively. About Chitown (if you're very careful in the yards) and Minneapolis you can go down to St. Louis, Kansas City and thence to L.A. via the southwest and thence up the coast to Seattle again. There are spots where you have to be cool and awake to avoid getting hooked off a train, but you soon learn how to do this. One set of part of America few people see anymore, too. Some roads (like U.P. and lot of southern and eastern lines) won't let you ride, but then again, this is always a relative thing, depending on who knows you're on a train, and who you ask. I advise caution in order to keep from an accident. The days in the city fall and to avoid getting cut in half or wiped out by a switch standard (if you are gonna mess with a train when its moving, you better know what you're doing), otherwise stay on or try off. R.R.'s stop. You get up to Prince George & Prince Rupert, and east and south as you find possible. I've heard good & bad things about Dixie and Mexico (R.R. freight) and don't know. Informations on your ticket—ask the workers (particularly the switchmen in big yards) where and when a long that is being made up for your destination. Be cool with R.R. dicks, they exit but sometimes you meet them in spite of intentions otherwise. "Innocence" is helpful in any situation. "I'm you didn't know you were doing anything wrong" and don't want to... etc. I find empties (except boxcars) the best, except in very long weather. Sometimes you might even get a ride in the caboose ("Cummy" it called) for a division or two. There are a lot of things that are "dangerous" like shifting loads crushing people etc. that I can't ever completely cover. Smutality and awareness about how the train functions is the other half of your ticket. Bring your own food, water and warmth. Almost there's a lot to it, but no more than a lot of other things. Well, at they say at Sausalito, Jima, someone, you can keep on trucks!

Shanti to Alan who was able to write a personal letter about a gristmill so ordered.

Hope to see you all

Daniel G. Leen  
Fairbanks, Alaska



# Communications

## Diagrams

A diagram is a conceptual map. Elegantly done it can ease comprehension. Thoroughly done it can aid analysis. Done with originality it can remake your internal world. This book, the first of its kind, is a splendid survey of the range and usefulness of diagramming.

—SB

### Diagrams

Arthur Lockwood  
1969; 144 pp.

\$15.00 postpaid

from:  
Watson-Guptill Publications  
155 West 46th Street  
New York, N. Y. 10036

or WHOLE EARTH CATALOG

\$10.56 postpaid from Blackwell's (p.2)

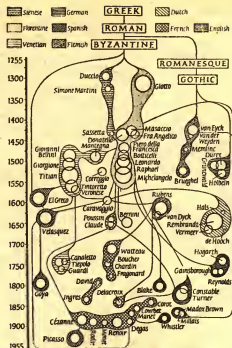
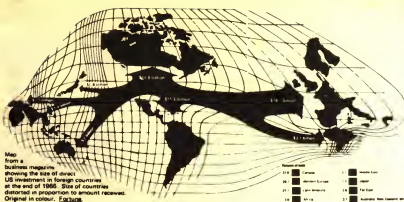


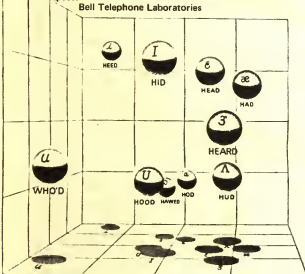
Chart from a book, showing chief schools of European painting from Giotto. Derived by Eric Newton who explains that it attempts to indicate relative importance of schools (series of shaded masses), approximate dates, principal artists (circle), relative importance (size of circle), threads of influence between schools and artists. Eric Newton, *European Painting and Sculpture*. Faber and Faber

There is no attempt to give this book a historical perspective, although some of the pioneers in the effective presentation of information in visual form are included. The pioneers include magazines such as *Fortune* and *Scientific American*; firms such as the Container Corporation of America, and particularly the Isotype Institute, London, whose approach and achievement has affected all designers of diagrams even though they may not be aware of their debt.



Map from a book, showing the spread of architectural styles from 1255 to 1955. Original in color. Faber and Faber

Diagram from an advertisement showing proximities (considered "near" together and confused, or "far" apart and seldom confused) of ten vowel sounds. Air-brushed spheres in space.



## Mapping

A map is the meeting ground of drawing, writing, and geometry. No other medium carries such a wealth of critical information at glance readiness. Students of brain and thought design are lately placing more and more emphasis on the matter of *Where-Is-It*—apparently much of the mind's store, retrieve, and relate systems are based on position relationships in mental space.

This book is a well-made introduction to map use, map construction, and something of the meaning of maps.

—SB



Land-form map. Accurate information shown with vividness and grace. Drawn by Erwin Raisz for a geography textbook \*

Pen pressed against T-square too hard

Pen sloped away from T-square

Pen too close to edge. Ink ran under

Ink on outside of blade, ran under

Pen blades not kept parallel to T-square

T-square (or triangle) slipped into wet line

Not enough ink to finish line

Avoidable troubles of the ruling pen

### Mapping

David Greenhood  
1944, 1964; 288 pp.

\$2.95 postpaid

from:  
University of Chicago Press  
5801 Ellis Ave.  
Chicago, Illinois 60637

or WHOLE EARTH CATALOG



We can scan the history of civilization as well as of mapping itself simply by observing which direction has topped the map. Erwin Raisz, the Harvard authority on cartography, says, "It seems to be a tendency among map makers of every country to put at the top of the map the direction toward which national attention is turned."

The Romans headed their maps as they so often did their empire-stretching ships, eastward. So did the Crusaders trying to recover the Holy Land. Many medieval wind roses have a cross as an east-mark.

Maps and charts—you may have noticed in this chapter the repetition of these two words. What's the difference in their meaning? Charts are maps with a special, practical purpose such as navigating, weather forecasting, and population studies. A chart is a map on which to work with protractor, compass, dividers, and gauges—even a densitometer.

This connection between local pinpoint and cosmic points is one of the majestic relationships recognized by science. Considering how much the mere idea of a map encompasses, maps are probably more unconfusing than anything else put down on paper. A map should be regarded as an endnote to poetic.

## The Image

This book is by an economist enchanted with cybernetics. He's after the organizing principle in life, the image the everything comes together through, the scarcely mentions the brain, and he's right. It ain't the brain.

—SB

[Suggested by Martha Neufeld]



The Image  
Kenneth E. Boulding  
1956; 175 pp.  
\$1.95 postpaid  
or WHOLE EARTH CATALOG

## Cybernetics

McLuhan's assertion that computers constitute an extension of the human nervous system is an accurate historical statement. The research and speculation that led to computer design arose from investigation of healthy and pathological human response patterns embodied in the topological make-up of the nervous system. Insights here soon expanded into generalizations about communication that permitted the building of analogous electronic devices physically separate from the Central Nervous System. But they're just one artifact of these new understandings about communication. Society, from organism to community to civilization to universe, is the domain of cybernetics. Norbert Wiener has the story, and to some extent, is the story.

—SB

The meaning of *e* message is the change which it produces in the image.

Between the incoming and outgoing messages lies the great intervening variable of the image. The outgoing messages are the result of the image, not the result of the incoming messages. The incoming messages only modify the outgoing messages as they succeed in modifying the image.

I have never been to Australia. In my image of the world, however, it exists with 100 per cent certainty. If I sailed to the place where the map makers tell me it is and found nothing but what I call I would be the most surprised man in the world. I hold to this part of my image with certainty, however, purely on authority. I have been to many other places which I have found on the map and I have almost always found them there. It is interesting to inquire what gives the map this extraordinary authority, an authority greater than that of the sacred books of all religions. It is not an authority which is derived from any political power or from any charismatic experience. As far as I know it is not a crime against the state nor against religion to show a map that has mistakes in it. There is, however, a process of feedback from the users of maps to the map maker.

There is a strong tendency for authoritarian organizations to use violence or the threat of violence in support of the role structure, that is, in order to gain acceptance of the role of one part of the persons occupying the lower role. For a time this may be successful in maintaining the organization. It is usually, however, self-defeating because of the corruption of the communication system which it entails. The case is somewhat analogous to that of the schizophrenic or the person who has a perceptual system as so much "afraid" of him that they merely confirm the products of his heated imagination. The terrorized information sources of the tyrant likewise tell him only what they think will be pleasing to his ears. Organizations as well as individuals can suffer from hallucinations. It is the peculiar disease of authoritarian structures.

To predict the future of a curve is to carry out a certain operation on its past.

The central nervous system no longer appears as a self-contained organ, receiving inputs from the senses and discharging into the muscles. On the contrary, some of its most characteristic activities are explicitly only as circular processes, emerging from the nervous system into the muscles, and re-entering the nervous system through the senses. Whether they be proprioceptors or organs of the special senses. This seemed to us to mark a new step in the study of that part of neurophysiology which concerns not solely the elementary processes of nerves and muscles but the performance of the nervous system as an integrated whole.

The feedback of voluntary activity is of this nature. We do not will the motions of certain muscles, and indeed sense that we do not know which muscles are to be moved to accomplish a given task; we will, say, to pick up a cigarette. Our motion is regulated by some measure of the amount by which it has not yet been accomplished.

I have spoken of the race. This is really too broad a term for the scope of most communal information. Properly speaking, the community extends only so far as there extends an effective transmission of information. It is possible to give a sort of measure to this by comparing the number of decisions entering a group from outside with the number of decisions made in the group. We can thus measure the autonomy of the group. A measure of the effective size of a group is given by the size which it must have to have achieved a certain stated degree of autonomy.

Thus small, closely knit communities have a very considerable measure of homeostasis; and this, whether they are highly literate communities in a civilized country or villages of primitive savages. Strange and even repugnant as the customs of many barbarians may seem to us, they generally have a very definite homeostatic value, which is it part of the function of ethnologists to interpret. It is only in the large community, where the Lords of Wealth as They are protect themselves from hunger by wealth, from public opinion by privacy and omniscience, from private criticism by the laws of libel and the possession of the means of communication, that ruthlessness can reach its most sublime levels. Of all of these anti-homeostatic factors in society, the control of the means of communication is the most effective and most important.

The mongoose begins with a feint, which provokes the snake to strike. The mongoose dodges and makes another such feint, so that we have a rhythmic pattern of activity on the part of the two animals. However, this dance is not static but develops progressively. As it goes on, the feints of the mongoose come earlier and earlier in phase with respect to the strikes of the cobra, until finally the mongoose attacks when the cobra is extended and not in a poised position. rapidly. This time the mongoose's attack is not a feint but a deadly accurate bite through the cobra's brain.

In other words, the analysis of action is confined to single attacks, each one for itself, while the pattern of the mongoose's action involves an appreciable, if not very long, segment of the whole past of the fight. To this extent the mongoose acts like a heuristic machine and the real deadlines of its attack is dependent on a much more highly organized nervous system.

To use a biological analogy, the parallel system had a better homeostasis than the series system and therefore survived, while the series system eliminated itself by natural selection.

We see that a non-linear interaction causing the attraction of frequency can generate a self-organizing system. . . .

At the other extreme, democratic structures in which there is no adequate leadership, that is, in which the feedback is destructive of the decision-making process on the part of higher roles are likewise unstable and incapable of maintaining themselves. If discussion is to be a successful process of decision-making it must exhibit a degree of convergence toward common sense of the whole organization. If the feedback from the followers destroys the image of the leader instead of merely modifying it, the process is likely to be self-defeating.

The image acts as a field. The behavior consists in gravitating toward the most highly valued part of the field. It does not follow from this, however, that the consequences of behavior are in conformity with the value of the field. Disappointment and surprise are a common lot of both organisms and organizations. We behave according to some image of the future, and the consequences of our acts. When, however, these consequences are reflected in information fed back to us, we find very often that feedback does not confirm the original image. Under these circumstances, as we have seen, the image may be modified or it may not.

In tracing the effect of images on the course of history, peculiar attention must be paid to the images of time and especially the images of the future. Curiously enough, it may not be so much the actual content of the image of the future which is important in its effect, but its general quality of optimism or pessimism, certainty or uncertainty. The image of the future may be so strong the nation that has a date with destiny goes somewhere, though not usually to the address on the label. The individual or the nation which has a sense of direction in time, that is, which has a sense ahead is likely to be activating, uncertain in behavior, and to have no chance of survival. Those images of the future which are most persistent and which have had the greatest impact on human history seem to be those which are impenetrable to feedback and which maintain themselves by their own internal beauty and consistency.



## OBJECTIVELY

Objectively, here's what happened: D. R. crawled under the ruins of the old soil pit and about fifty yards back into the old abandoned mine.

And there in the dark and the moist cool he went ahead and freaked out completely.

That really happened. Let's take it back. Leonard's son, decided he'd walk up Trace Fork and see how Emmitt and his nephew were getting along after their first day together. Leonard had been going to see Emmitt every day or two since he'd been sick. Even before he was sick he went up just to visit Emmitt a couple of times a week, to talk him the things he needed, eat talk a while, and now and then to sip a little moonshine with him, or learn that Leonard's cousin Daniel made.

And now the nephew was there, and Leonard thought he'd just stroll up and say hello, and see if they needed anything.

And found D. R. filthy dirty, sitting in the weeds there by the fallen timbers of the tipple of the old Blair Brothers mine.

He looked like a casualty of war.

If it had been anybody besides Leonard that found D. R. like that they would almost certainly have handled it wrongly. Probably they would have run to the nearest telephone and called the doctor, and maybe even the magistrate.

But Leonard was a man of strange and eccentric ideas. Emmitt Collier. There were people around who thought of Emmitt as actually crazy, but they would never have said so around Leonard, because they knew Leonard would defend Emmitt and because many people were inclined to argue with Leonard, or contradict him. Not that they were afraid. Leonard did not inspire fear in anyone. Not that they were feeling most people had toward Leonard. Trust, and confidence in him as an honest man, and strong.

He was the kind of man, the kind of mountaineer, who inevitably makes sergeant in the military, simply because it is so apparent to everybody around him that he is a man of great courage and the stripes. The assumption happens automatically in the minds of everybody who's looking. Some men are just born with the qualities it takes to impress other men as a leader, and Leonard was one of them.

During World War Two he served four years and five months in the Army, and came out a First Sergeant, with a year and a half in grade.

I mention these details about Leonard to give some indication of the kind of fellow he was. His story is as rich and complex as Emmitt's or D. R.'s, and it will have to be told some day. But for now, let's just think of him as modest, and observe him as he deals with his bizarre decision of Emmitt's nephew, sitting behind a bench, as filthy by a pile of rotting logs half-way up a creek that except for one old man has been abandoned by humankind.

Leonard speaks to D. R. gently, and looks into his eyes.

D. R. looks back into Leonard's eyes, and when Leonard says who he is, D. R. recognizes him, and understands where he is.

Cybernetics — or Control and Communication in the Animal and the Machine

Norbert Wiener  
1948; 1961; 212 pp.

\$2.45 postpaid

from:  
The M. I. T. Press  
Cambridge, Mass. 02142

or WHOLE EARTH CATALOG



## Understanding Media

Everybody talks about McLuhan, and everybody does something about him, and that makes it subjectively harder to get at him. He's got other insights than what you hear about, so it's worth the trouble to track him down, both his current sayings and his prime collections. An excellent set of recent sayings was in a *Playboy* interview a few months ago (he foresaw the imminent demise of language into global telephony: "The body of Christ"). For prime collection the primist is *Understanding Media*.

—SB [Suggested by Gard Stern, then.]

Said the Duke of Gloucester to Edward Gibbon upon the publication of his *Decline and Fall*: "Another damned fat book, eh, Mr. Gibbon?" Scribble, scribble, scribble, eh, Mr. Gibbon?

As W. B. Yeats wrote of this reversal, "The visible world is no longer a reality and the unseen world is no longer a dream."

Not only does the visual, specialist, and fragmented Westerner have now to live in closest daily association with all the ancient oral cultures of the earth, but his own electric technology now begins to translate the visual or eye man back into the tribal and oral pattern with its seamless web of kinship and interdependence.

## Communication Arts

a sticky for graphics freaks, and ad men, people who cut things out of magazines, to paste them on walls, christmas cards, kleenex boxes, and catalogs, expensive but pretty.

—jd



Communication Arts  
Richard Coyne, editor.

\$15.00 per year (bimonthly) from:  
Communication Arts  
P.O. Box 10300  
200 California Avenue  
Palo Alto, California 94303

## By the Late John Brockman

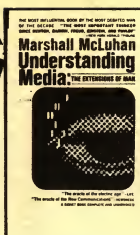
John Brockman, though dead, is in his late twenties and agile in New York. His book is an interpretation of recent work in brain-study, information theory, and art. It proposes that man is dead, replaced by a superior being—once he learns this—called invisible.

—SB

Man is dead. Credit his death to an invention. The invention was the grasping of a conceptual whole, a set of relationships which had not been previously recognized. This invention was man-made. It was the recognition that reality was communicable. The process was the transmission of neural patterns. Such patterns are electrical, not mental. The system of communication and control functioned without individual human awareness or consent. The message was nonlinear: operant neural pattern. It became clear that "new concepts of communication and control involved a new interpretation of man, of man's knowledge of the universe, and of society." Man is dead. "We're talking."

Every movie is the first movie. The brain goes into its stereotyped movie program even before the ticket is purchased. The information received by the brain from the experience of purchasing a ticket may be enough to activate the hormonal responses of the movie experience. Buy your ticket: See the movie.

308 Silence  
Communications



Understanding Media  
Marshall McLuhan  
1964; 318 pp.

\$1.25 postpaid

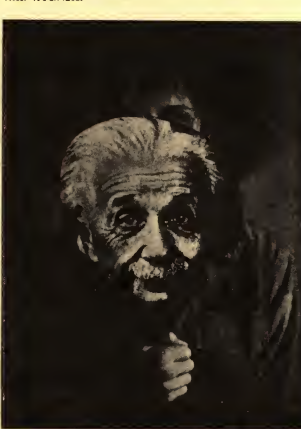
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1301 Avenue of the Americas  
New York, N. Y. 10019

or WHOLE EARTH CATALOG

Even slight changes in the environment of the very well adjusted find them without any resource to meet new challenge. Such is the plight of the representatives of "conventional wisdom" in any society. Their entire stake of security and status is in a single form of acquired knowledge, so that innovation is for them not novelty but annihilation.

Hes: Products very definitely have a life span. Proctor and Gamble knows this, and they have very tightly documented projections on each one of their products. They know two or three years in advance when they can expect that product to peak out and end its eventual decline. Perhaps some studies should be made. It would behoove publishers to take that same point of view that the package goods manufacturers do and schedule a new product or some kind of revitalization of the old product to coincide with that peak before the decline.

Coyne: You mean fire the publisher and the editor and start over?  
Hes: It's an idea.



By the Late John Brockman

## By the Late John Brockman

John Brockman;

1965; 166 pp.

\$6.95 postpaid

from:  
Macmillan Company  
Front and Center Streets  
Riverside, Burlington County  
New Jersey 08075

or WHOLE EARTH CATALOG

The concept of ecumenical technology provides a frame of reference which points to clues about the invisible stage of our central nervous system. The ecumenism of technology is the unitive force that can make all brains perform the same operations simultaneously. Ecumenical technology is the key to the simultaneous universe of electronic communications. Consider that in the pre-electric age the operations of multitudes of brains in the world would function on different frequency bands. With electronics, an important event on television will mean that on the neural level millions upon millions will have a ray projected onto their retina, providing that brains with the information needed to maintain continuity. This information measures a change in the brain's activity, a frequency modulation. Every brain working the same way, on the same frequency, the same wavelength, performing the same operations simultaneously. Not brotherhood, but unity. Ecumenical technology.

It was all invisible to man. The clash of generations, the crashing down of institutions, the divisiveness—it was all invisible. Man never knew what was happening. To the invisible, it was a question of nonynchronization of frequencies, where certain brains were unable to adapt to new rhythms of the information received within parameters consistent with continuity. It became a question of phylogenetic suicide. To the invisible—out of phase. To man: out of mind. Who's crazy?

Meantime, the countryside, as oriented and fashioned by plane, by highway, and by electric information-gathering, tends to become once more the nomadic trackless area that preceded the wheel.

Eventually the method of the counting board gave rise to the great discovery of the principle of position in the early centuries of our era. By simply putting 3 and 4 and 2 in position on the board, one after another, it was possible to step up the speed and potential of calculation fantastically. The discovery of calculation by positional numbers rather than by merely additive numbers led, also, to the discovery of zero. Mere positions for 3 and 2 on the board created ambiguities about whether the number was 32 or 302. The need was to have a sign for the gap between numbers. It was not till the thirteenth century that the Arab word for "gap" or "empty," was Latinized and added to our culture as "cipher" (zephinum) and finally became the Italian zero. Zero really meant a positional gap.

Work, however, does not exist in a nonliterate world. The primitive hunter or fisherman did not work, any more than does the poet, painter, or thinker of today. Where the whole man is involved there is no work.

If the phonetic alphabet was a technical means of severing the spoken word from its aspects of sound and gesture, the photograph and its development in the movie restored gesture to the human technology of recording experience.

Man the food-gatherer reappears inconspicuously as information-gatherer. In this role, electronic man is no less a nomad than his paleolithic ancestors.

Everybody experiences far more than he understands. Yet it is experience, rather than understanding, that influences behavior, especially in collective matters of media and technology, where the individual is almost inevitably unaware of their effect upon him.

It is a principal aspect of the electric age that it establishes a global network that has much of the character of our central nervous system. Our central nervous system is not merely an electric network, but it constitutes a single unified field of experience. As biologists point out, the brain is the interacting place where all kinds of impressions and experiences can be exchanged and translated, enabling us to react to the world as a whole.



## Culture is Our Business

McLuhan's best format. Each pair of pages has a reprint of an ad on the right, and fresh McLuhan aphorisms, quotes, and misquotes on the left. The resulting energy across the spread is economic and multi-directional—i.e. you make it. Pound's statement (next p.) about Chaucer and Shakespeare applies as well to McLuhan.

To me he is as valuable. His news stays news.

—SB

### Culture Is Our Business

Marshall McLuhan  
1970. 336 pp.

\$10.00 postpaid

from:  
McGraw-Hill Book Co.  
Princeton Road  
Hightstown, N. J. 08520  
Manchester Road  
Manchester, Mo. 63062  
8171 Redwood Highway  
Novato, CA 94947

or WHOLE EARTH CATALOG

Ads are the cave art of the twentieth century. While the Twenties talked about the cave man, and people thrilled to the art of the Altamira caves, they ignored (as we do now) the hidden environment of magical forms which we call "ads." Like cave paintings, ads are not intended to be looked at or seen, but rather to exert influence at a distance, as though by ESP. Like cave paintings, they are not means of private but of corporate expression. They are cortices of collective power, masks of energy invented by new tribal men.

Since Sputnik there is no Nature. Nature is an item contained in a man-made environment of satellites and information. Goals have now to be replaced by the sensory reprogramming of total environments and DNA particles, alike. The earth is an old nose cone.

Today, through ads, a child takes in all the times and places of the world "with his mother's TV." He is gray at three. By twelve he is a confirmed Peter Pan, fully aware of the follies of adults and adults in general. There could be called Spock's Spooks, who now peer at us from every quarter of our world.

Poets and artists live on frontiers. They have no feedback, only feedforward. They have no identities. They are probes.

### Silence

John Cage's seminal work that initiated us all to the uses of audible darkness. How to be undefended. Also how to enjoy mushrooms, zen, famous people, and space-time crossword puzzles. I've never met a person who liked John Cage's music, or disliked his sunny books.

—SB

### Silence

John Cage  
1961. 276 pp.

\$2.95 postpaid

from:  
MIT Press  
50 Ames St.  
Cambridge, Massachusetts 02142

or WHOLE EARTH CATALOG

### I BELIEVE THAT THE USE OF NOISE

Wherever we are, what we hear is mostly noise. When we ignore it, it distorts us. When we listen to it, we find it fascinating. The sound of a truck at fifty miles per hour. Static between the stations. Rain. We want to capture and control these sounds, to use them not as sound effects but as actual instruments. Every film studio has a library of "sound effects" recorded on film. With a film phonograph it is now possible to control the amplitude and frequency of any one of these sounds and to give it rhythms within or beyond the reach of the imagination. Given four film phonographs, we can compose and perform a quartet for explosive motor, wind, heartbeat, and landslide.

Psychically, art is valuable only when new.

COMMERCIALLY, NEW ART IS KOOKY AND WORTHLESS.

The gap between the kooky and the commercially valuable is closing fast.



"We'll return to our commercials after this brief word from the program..."

Good Housekeeping

Invention is the mother of necessity.

GOING, GOING, GONG

When the evolutionary process shifts from biology to software technology the body becomes the old hardware environment. The human body is now a probe, a laboratory for experiments. In the middle of the nineteenth century Claude Bernard was the first medical man to conceive of *milieu interieur*. He saw the body, not as an outer object, but as an inner landscape, exactly as did the new painters and poets of the avant garde.



Unfure distal, Warner's will.

One doesn't invent. Young Theng, here will do it for \$5. One doesn't invent. Warner's will do it for \$10. Warner's will do it for \$10. Warner's will do it for \$10.

NBC and CBS could easily become the political "parties" of the future, just as the New York Central and the Pennsylvania railroads were once the political parties of the nineteenth century.

"Wiretapping," quoth the raven, "is a threat to identity. Why not beat 'em to the wire? Get rid of your identity now."

### Political Buttons

Lowest prices to movement organizations. Best quality we've seen. Fast delivery—faster if requested. Union label on all. Open account privileges: About 150-200 stock buttons (not run-of-the-mill slogans) for immediate shipment. Nice people to deal with. Very personal attention to all orders.

from:  
Printed Celluloid Buttons  
Larry Fox Associates  
P.O. Box 581  
Hempstead, NY 11551

Karen Penner  
Valley Stream, NY

list available



And when Leonard says why don't you come on with me, David, and wash up some, D. R. is more than glad to follow.

Leonard leads D. R. on up the hill to the place where Emmitt's water-pipe from the spring empties into a fifty-gallon barrel, the water point for Emmitt's little garden and rabbit scene, above the old falling-down barn.

And he pours water on D. R. and D. R. washes himself all over the best he can.

Then Leonard leads D. R. around the hill and down a ways, past the barn, and along a path now to the old main house of the homestead, where old bearded, feeble Emmitt sits on the porch in a rocking chair.

Leonard speaks to Emmitt, quietly. D. R. can't hear what he says, nor can he hear when Emmitt nods and quietly replies.

Emmitt gets up and leads D. R. into the house, into a bedroom, and smoothly without an interruption into a sleep so deep that for a long time there is no dream.

During a counterpoint class at U.C.L.A., Schoenberg sent everybody to the blackboard. We were to solve a particular problem he had given and to turn around when finished so that he could check on the correctness of the solution. I did as directed. He said, "That's good. Now find another solution." I did. He said, "Another." Again I found one. Again he said, "Another." And so on. Finally, I said, "There are no more solutions." He said, "What is the principle underlying all of the solutions?"

In the space that remains, I would like to emphasize that I am not interested in the relation to life we find in fascinating. The sound of a truck at fifty miles per hour. Static between the stations. Rain. We want to capture and control these sounds, to use them not as sound effects but as actual instruments. Every film studio has a library of "sound effects" recorded on film. With a film phonograph it is now possible to control the amplitude and frequency of any one of these sounds and to give it rhythms within or beyond the reach of the imagination. Given four film phonographs, we can compose and perform a quartet for explosive motor, wind, heartbeat, and landslide.



## The Elements of Style

Watch a craftsman work. With a few well-cared-for tools and steady unshowy motions he keeps the work moving steadily toward completion. The result looks as if you must have been easy to do, surprisingly inevitable. As it can write like that. Here are the tools.

—SB

**The Elements of Style**  
William Strunk, Jr., E.B. White  
1959: 71 pp.  
\$0.95 postpaid

from:  
Macmillan Co.  
866 Third Ave.  
New York, N.Y. 10022

or WHOLE EARTH CATALOG

### 10. Use the active voice.

The active voice is usually more direct and vigorous than the passive:

*I shall always remember my first visit to Boston.*

This is much better than

*My first visit to Boston will always be remembered by me.*

The latter sentence is less direct, less bold, and less concise.

### 11. Put statements in positive form.

Make definite assertions. Avoid tame, colorless, hesitating, noncommittal language. Use the word *not* as a means of denial or in antithesis, never as a means of evasion.

*He was not very often on time.*

*He usually came late.*

*He did not think that studying Latin was much use.*

*He thought the study of Latin useless.*

### 12. Use definite, specific, concrete language.

Prefer the specific to the general, the definite to the vague, the concrete to the abstract.

*A period of unfavorable weather set in.*

*It rained every day for a week.*

*He showed satisfaction as he took possession of his well-earned reward.*

*He grinned as he pocketed the coin.*

### 18. Place the emphatic words of a sentence at the end.

The proper place in the sentence for the word or group of words that the writer desires to make most prominent is usually the end.

*Humidity has hardly ended in fortitude since that time, though it has advanced in many other ways.*

*Humidity, since that time, has advanced in many other ways, but it has hardly advanced in fortitude.*

*This steel is principally used for making razors, because of its hardness.*

*Because of its hardness, this steel is principally used in making razors.*

The breezy style is often the work of an egotistic, the person who imagines that everything that pops into his head is of general interest and that unless he writes it down he is losing it. The style is in a straight-forward manner. What the first writer tried to accomplish by cutting rhetorical capers and by breeziness, the second writer managed to achieve by good reporting, by keeping a tight rein on his material, and by staying out of the act.

*Well, chums, here I am again with my bagful of dirt about your dirty old classmates, after spending a helluva weekend in NY/Tark trying to view the Columbia game from behind two bumbershoots and a glazed cornucopia. And speaking of news, houseboat toasting a few nice niggers my way?*

This is an extreme example, but the same wind blows, at lesser velocities, across vast expanses of journalistic prose. The author in this case has managed in two sentences to commit most of the unpardonable sins: he obviously has nothing to say, he is showing off and directing the attention of the reader to himself, he is using slang with neither provocation nor ingenuity, he adopts a patronizing air by throwing in the word "chums," he is relentless, humorless (though full of fun), and, to amplify, he has not done his work. Compare his opening remarks with the following—a plunge directly into the news:

*Clyde Crawford, who stroked the veracity shell in 1928, is springing an arrest after a lapse of thirty years. Clyde resigned last Tuesday as executive sales manager of the Indiana Police Company and is now a gonologist in Venice.*

This, although conventional, is compact, informative, unpretentious. The writer has dug up an item of news and presented it in a straightforward manner. What the first writer tried to accomplish by cutting rhetorical capers and by breeziness, the second writer managed to achieve by good reporting, by keeping a tight rein on his material, and by staying out of the act.

## ABC of Reading

In grade and high school I was taught how to hate Shakespeare, most novelists, and all poetry. College merely burned my ignorance, adding the ability to hate in French. Ezra Pound, where were you when I needed you? The result looks like literature becomes a place to relax, confirm, maybe even grow.

SB

(Suggested by Frank Deisi)



**ABC of Reading**  
Ezra Pound  
1934: 208 pp.

\$1.60 postpaid

from:  
New Directions Publishing Corp.  
E. B. Lippincott Co.  
East Washington Square  
Philadelphia, PA 19105

or WHOLE EARTH CATALOG

It doesn't, in our contemporary world, so much matter where you begin the examination of a subject, so long as you keep on until you get round again to your starting-point.

Language is a means of communication. To change language with meaning to the utmost possible degree, we have, as stated, the three chief means:

I throwing the object (fixed or moving) on to the visual imagination.

II inducing emotional correlations by the sound and rhythm of the speech.

III inducing both of the effects by stimulating the associations (intellectual or emotional) that have resulted in the reader's conclusions in relation to the actual words or word groups employed.

## Literary Essays of Ezra Pound

Someone was set on a trip (Spring, 1970 Catalog) when she found that Ezra Pound had delivered unto man the only good mind-blower on language and literature in the ABC of Reading. In the ABC, though, E.P. only elaborated on a much more concise and potent pronouncement he handed down in the New York Herald Tribune's supplement in 1927 or 1928 under the title "How to Read." That reading lesson is available in the company of thirty-five other vigorous and iconoclastic forays by E.P. in the Literary Essays of Ezra Pound (also New Directions pbk: NDP250/\$3.25). For less than three times the bread for the ABC, E.P. will spring open your mind and ears as he lets go with some sharp barbs at "institutions for the obstruction of learning" and their inhabitants, while he lets you see and connect with those men, from the Medieval troubadours to Brancusi, who knew where and what it was and how to put it together long before we even were.

(Suggested and reviewed by Joseph)

**Literary Essays of Ezra Pound**  
T.S. Eliot, ed.  
1958: 1968: 464 pp.

\$3.25 postpaid

from:  
New Directions Publishing Corporation  
East Washington Square  
New York, N.Y. 19105

or WHOLE EARTH CATALOG

A civilization was founded on Homer, civilization not a mere bloated empire. The Macedonian domination rose and grew after the sophists. It also subsided.

It is not only a question of rhetoric, of loose expression, but also of the loose use of individual words. What the rhetoricians gained in direct examination of nature's phenomena, it in part lost in lofty feel and desire for exact descriptive terms. I mean that the medieval mind had little but words to deal with, and it was more careful in its definitions and verbiage. It did not define a gun in terms that would just as well define an explosion, nor explosions in terms that would define rattlers.

Quoting Confucius, one might say: It does not matter whether the master define the good of the race or acts merely from personal utility. The thing is mechanical in action. In proportion his work is exact, true to human consciousness, and to the nature of man, as is exact in formulation of desire, so it is durable and so it is useful; I mean it maintains the precision and clarity of thought, not merely for the benefit of a few distant and "lovers of literature," but maintaining the health of thought outside literary circles and in non-literary existence, in general individual and communal life.

No one wants the native American poet to be at concert with the literary affairs of Paris and London in order that he may make imitations of Paris and London poets, but precisely in order that he shall not waste his lifetime making unconscious, or semi-conscious, imitations of French and English models thirty or forty or an hundred years old.

Style results; it does not precede.

Nothing so fits a person of a life of dedicated useless unhappiness as four years of majoring in English.

—SB

(epitaphic, melopoeia, logopoeia)

Incompetence will show in the use of too many words.

The reader's first and simplest test of an author will be to look for words that do not function; that contribute nothing to the meaning OR that detract from the MOST important factor of the meaning to factors of minor importance.

"Literature is news that STAYS news."

The man who really knows can tell all that is transmissible in a very few words. The economic problem of the teacher (of violin or of language or of anything else) is how to string it out so as to be paid for more lessons.

Men do not understand BOOKS until they have had a certain amount of life. Or at any rate no man understands a deep book, until he has seen and lived at least part of its content. The prejudice against books has grown from observing the stupidity of men who have merely read books.

Chaucer and Shakespeare have both an insuperable courage in tackling any, but absolutely any, thing that arises under their interest.

The sonnet was first the "little tune," the first strophe of a canzone, the form found when some chap got so far and couldn't proceed. Steadily in the wake of the sonnetters came the dull poets.

## How to Need a Catalog

Wendell Berry says this letter is a fugue. It's a real letter written by a man who says what he means. It came to us through Gurney Norman.

—SB

### Dear TV Star Editor

I am writing you this letter for some help from this TV Show. That I am a single man looking for a wife. I am 61 years old not never been married. I am trying to find a woman of any age and near my age 61 years old and as tall as I am tall. I am even 6 feet tall weigh 158 lbs. I am looking for some put about at tall that would weigh from 250 or better with extra wide hips and extra wide large full breast with such a pretty nice large heavy extra wide round well built hips and extra wide full large hips and very pretty well built chest and filled around her legs and waist line I would like to get married to some of the colored widow and to some white German and to some Indian women. I would like to join in and go with the widest shows. I like to ride these montana and North Dakota North Western wild unbroken horses. And mares. I have been with the rodeo show since I was 13 years old. I cannot get no other kind of work around here or no construction work or any other kind of work. Because I am not a married man. But I will tell you that I am a real good man yet that can go out and do a good days work yet. I like my wild and tame mare horses and I like also my women nice and heavy set with extra wide round legs and hips around their waist and extra wide and large full size breast I would like to get those naked women without anything on their bodies. Just there skins. I would like to see there naked full size breast and there extra wide waist and extra round heavy legs above there knees and extra round fat arms. There full fat arms. There full blith of three stout heavy naked body. Will you please send me a free book of all kind of women that are colored White German Spanish Indian race and all different race widow women. I do like to get acquainted with all different white red widow women. I want there names and address from them and from you. I would like to ask you if you please help a poor man as long as he is sick in the hospital. I am looking for some help bill I could get back on my feet again. I will soon get my discharge this hospital next month in August or in the month of September of this year in 1962. I am looking for some help from you and from the widow women. I need some writing paper envelopes and some stamps so I can write you also to the women. I want them to be red extra stout and well weight set around the legs above the knees. That would have a very nice big farm plenty of wild tame unbroken colts and and hereford white face heifers tame and wild mare horses and if they have about 375 head of these red heavy stout and hips and also some real heavy laying red chickens that weigh 73 up to 98 pounds. I like all my women real extra heavy with full wide large breast also with extra large full wide extra round fat legs above the knees and there widest part of the thighs and some wide hips bones. That do measure 74 around there breast and a 78 there widest and the thickest of there thighs above the knees. And also some one hips and extra round fat arms. Above there fore-arm extra round fat calf and the thighs of there legs. That would not weight less than 250 hundred to 358 hundred pounds. or over there 358 pounds. I like all my women real extra stout full large size breast and real extra wide across there large size part of the hips and the waist line extra round fat legs down to the knees and there widest part of the thighs and some wide arms to the series of the hand. I do like to have some of the widow women help me and send me some money about \$5.00 or more. I want to come to the state of New York Because I live not in New York state at all wish to come to New York and find myself some colored and white widow women. That I could get some farm and ranch work and live with all the colored Indian white widow women I want a home with every one of the white women colored widow women and all the red Indian widow women. Will you please answer on this letter. Please send me a widow woman catalog of all colored, white and Indian widow women.





Intelligent Life in the Universe

Methodically blow your mind. The information in this book, mutually massaged by the American and Soviet co-authors, proceeds from superb introductions to evolutionary astronomy and biology, through a complete presentation of recent discoveries of astronomy and space science, to brilliant speculation on the parameters of inter-civilization communication. It's the best general astronomy book of recent years but that's nothing next to its impact on all the biggest questions we know.

-SB

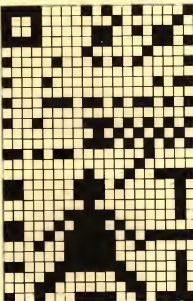


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FIGURE 30-1. A hypothetical interstellar message due to Frank Drake. The 551 zeros and ones are representations of the two varieties of signals contained in the message. The problem is to convert this sequence of 551 symbols into an intelligible message, knowing that there has been no previous communication between the transmitting and receiving civilizations.

Intelligent Life in the Universe  
I.S. Shklovskii and Carl Sagan  
1966; 505pp.  
\$2.95 postpaid  
from:  
Delta Books  
c/o Montville Warehousing Co., Inc.  
Changbridge Road  
Pine Brook, New Jersey 07058  
Pratt Boulevard  
Elk Grove Village, Illinois 60007  
1104 S. Lawrence Street  
Los Angeles, Ca. 90021  
or WHOLE EARTH CATALOG

- 1. Decode this +
- 2. Into this +



The existence of more than one universe is impossible, by definition.

But how can a natural satellite have such a low density? The material of which it is made must have a certain amount of rigidity, so that cohesive forces will be stronger than the gravitational tidal forces of Mars, which will tend to disrupt the satellite. Such rigidity would ordinarily exclude densities below about 0.1 gm/cm<sup>3</sup>. Thus, only one possibility remains. Could Phobos be indeed rigid, on the outside—but hollow in the inside? A natural satellite cannot be a hollow object. Therefore, we are led to the possibility that Phobos—and possibly Deimos as well—may be artificial satellites of Mars.

So, by an interesting coincidence, the distances between the stars in interstellar space, relative to their diameters, are just about the same as the distances between the atoms and molecules in interstellar space, relative to their diameters. Interstellar space is as empty as a cubical building, 60 miles long, 60 miles wide, and 60 miles high, containing a single grain of sand.

Extraterrestrial Civilizations

A technical discussion by Russian scientists.

-SB

Extraterrestrial Civilizations

G. M. Tommasey  
1964; 99 pp.  
\$4 postpaid  
from:  
U.S. Department of Commerce  
Clearinghouse for Federal  
Scientific and Technical Information  
Springfield, Virginia 22151

We have no doubt whatsoever that life and civilizations exist on a multitude of celestial bodies, but we must go in some detail into the question of possible technological disparity between these civilizations. Although the Earth civilization, in the broad sense of the word, is a few tens of millennia old, the modern technological civilization has its origin no more than two hundred years in the past. It is moreover highly significant for the problem under consideration that the present-day notions on stellar systems, i.e., the conceptual approach which has suggested the multiplicity of inhabited worlds, have arisen and developed during the last two centuries. And yet, the ages of planets may differ by as much as millions of years. Hence the apparent conclusion that different civilizations in the Universe may differ by millions of years in their respective development. It seems that the Earth civilization is not yet past the diapers age, and that there should be enormous disparity between extraterrestrial civilizations.

Charles Fort

SUGGESTION FOR WHOLE EARTH CATALOG

Name of item: The Books of Charles Fort. 4 volumes:  
The Book of the Damned; New Lands; Lo!; and Wild Tales.  
from: Ace Books, 1120 Avenue of the Americas, New York, N. Y. 10036

Review: Reading Charles Fort (1874-1932) is like getting a forestate of Buckminster Fuller, so I asked Fuller if he had known Fort. He hadn't, but it turns out he was writing the introduction to Damon Knight's forthcoming biography of Fort. Ace has recently reprinted Fort's works in paperback; they are stacked with the psychic-and-saucer books. But don't overlook Fort. Each of his books is laden with reports of unorthodox, widely recurrent, phenomena—but he uses the material as a tongue-in-cheek, comprehensive philosophy. He throws galactic theories at you like paper airplanes, laughing at himself as often as at dogmatic orthodoxy. Some examples of his style:

Much of the argument in this book will depend upon our acceptance that nothing in our existence is real. The Whole may be Realness.  
—Wild Terrors

Mineral specimens now in museums—calcites that are piles of petals—that long ago were the rough notes of a rose.  
An early stage within the shell of an egg—and a protoplasmic line of growth feels out through surrounding substance—and of itself it is lost. Nourishment and protection and guidance come to it from the whole.

Or occasional falls of "manna", to this day, in Asia Minor, may be only one factor in a wider continuance, . . .  
—Lo!

Gene Keyes  
Carbondale, Ill.

Almost any other of the many accounts of alleged contacts of human beings with the crews of flying saucers—accounts which regale the flying saucer societies—follow the same pattern and stress the same points. The extraterrestrials are human, with few even minor physical differences from local cosmetic standards. (I know of no case of Negro saucerians, or Oriental saucerians, reported in the United States; but there are very few flying saucer reports made in this country by Negroes or by Orientals.)

Radio astronomers may be interested to know that the so-called "brightness temperature" of the Earth at television wavelengths is some hundreds of millions of degrees. This is 100 times greater than the radio brightness of the sun at comparable wavelengths, during a period of low sunspot activity.

Taken at face value, the legend suggests that contact occurred between human beings and a non-human civilization of immense powers on the shores of the Persian Gulf, perhaps near the site of the ancient Sumerian city of Eridu, and in the fourth millennium B.C. or earlier. There are three different but cross-referenced accounts of the Arkali, dating from classical times.

"Well, ladies and gentlemen," Struve concluded, "it was pretty dull on Epsilon Eridani and Tau Ceti eleven years ago."

Thought Forms

Well, for once I'm truly sorry our reviews are limited to illustrations in shades of grey. The power of these 58 extraordinary images is mostly in their color, unseeable, unearthly, delicious. The images were seen by the authors as clear representations of human states of mind. Pioneer work.

-SB  
[Suggested by Jordan Belson]



Thought Forms  
Annie Besant and C. W. Leadbeater  
1901, 1969; 77 pp.  
\$3.45 postpaid

from:  
Theosophical Publishing House  
Box 270  
Wheaton, Illinois 60187  
or WHOLE EARTH CATALOG

Three general principles underlie the production of all thought forms:  
1. Quality of thought determines color.  
2. Nature of thought determines form.  
3. Definiteness of thought determines clearness of outline.



Thought form of high ambition.



Thought form of selfish ambition.

## Human Biocomputer

**BACK IN PRINT.** After a year of absence, this landmark paper is back at a lower price (formerly \$7.95, now \$1.50). John Lilly has worked for a long time with sensory deprivation, pursuing the notion that relieving the computer (mind) of many of its environmental-survival chores frees it to attend more fully to self-investigation. Of late he's added LSD to the process and has found ways to flourish and discover within this doubly floating condition.

The paper **HUMAN BIOCOMPUTER** is the best internal guidebook I've seen—for more practical and generalized than transcendent Eastern writings or wishful Underground notes. Though it's not the whole story by any means, it makes an open start on fresh language and powerful technique for the frontier.

An additional advantage the paper offers is the opportunity to learn and explore computers without requiring money or administrative approval. You inherited and grew everything you need, and it's free. —SB

[Suggested by Ralph Metzner]

In the analysis of the effects of LSD-25 on the human mind, reasonable hypothesis states that the effect of these substances on the human computer is to introduce "white noise" (in the sense of randomly varying energy containing no signals of itself) in specific systems in the computer.

The increase in "white noise" energy allows quick and random access to memory and lowers the threshold to unconscious memories ("expansion of consciousness"). In such noise one can project almost anything at almost any cognitive level in almost any allowable mode.

The noise introduced brings a certain amount of disorder with it, even white noise in the physical world brings randomness. However, the LSD-25 noise renders signals only in a limited way: not enough to destroy all order, only enough to superimpose a small creative "jiggling" on program materials and metaprograms and their signals.

## The Mind of the Dolphin

Lilly knows that it is to everybody's advantage for one kind of computer to link up with another, and that's his program with dolphins. This book reports his speculations and experiments with dolphins in recent years. Included is a thorough account by a girl, Margaret Howe, who lived alone with Peter Dolphin for 10 weeks. As usual with research on communication, everything discovered has broad implications.

—SB

### The Mind of the Dolphin

John Cunningham Lilly, M.D.

1967, 286 pp.

\$1.95 postpaid

from:

Avon Books  
250 West 55th Street  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

Sometimes I feel that if man could become more involved in some problems of an alien species, he may become less involved with his own egocentric pursuits, and deadly competition within his species, and become somehow a better being.

We are often asked, "If the dolphins are so intelligent why aren't they more like us?" My very considered answer to this is—they may be too wise to try to rule the world. The question can be easily turned around. Why does man or individual men want to rule the world? I feel that it is a very insecure position to want to rule all of the other species and the vast resources of our planet. This means a deep insecurity with the "universes" inside of one's self. One of man's and one's anger are being projected on others outside of one's self; to rule the world is, finally, to rule one's inner realities.

Thus a given dolphin can carry on a whistle conversation with his right side and a clicking conversation with his left side and do the two quite independently with the two halves of his brain.

Conservatively, we estimate that the dolphin can put out ten times the sonic physical information per second that a man produces.

## Programming and Metaprogramming

in the Human Biocomputer—

Theory and Experiments

John C. Lilly, M.D.

1967, 1970, 112 pp.

\$1.50 postpaid

from:

WHOLE EARTH CATALOG  
550 Santa Cruz Avenue  
Menlo Park, CA 94025

books for resale from:

COOP PEOPLE

2940 Seventh Street

Berkeley, California 94710

The boundary of the brain, of course, may be considered as the limits of the extensions of the central nervous system into the periphery.

Later with higher motivational energy the subject returned to the problem of the lock, the doors and the rooms somewhat refreshed by the experiences in the other realms.

In the complete physical absence of other external computers within the critical interlock distance, the self-directed and other-directed programs can be clearly detected, analyzed, recomputed, re-programmed, and new metaprograms initiated by the solitudinous computer itself. In the <completely-as-possible-attenuated-physical-reality environment in solitude, a maximum intensity, a maximum complexity and a maximum speed of re-programming is achievable by the self.

For example, the term "reprogramming substances" may be appropriate for compounds like isopropyl acid diethylamide. For substances like ethyl alcohol the term "metaprogram-attenuating substances" may be useful.

PROGRAMMING AND  
METAPROGRAMMING  
IN THE  
**HUMAN  
BIOCOMPUTER**  
110 PAGES, 10 X 10 IN.  
"A volume of the 'Mind of the Dolphin,' 'Theories and Experiments,'  
and 'Metaprogramming' by John C. Lilly."

The major problems of the research of interest to the author center on the erasability, modifiability, and creatibility of programs. In other words, I am interested in the processes of finding metaprograms (land methods and substances) which control, change, and create the basic metaprograms of the human computer. It is not known whether one can really erase any program.

I believe that by using certain methods and means some of which are presented in this work that truly talented and dedicated individuals can forge, find, and devise new ways of looking at our minds, ways which are truly scientific, intellectually economical, and inter-actively creative. Consider for example, the case of the fictitious individuals created by the group of mathematicians masquerading under the name of "Dr. Nicholas Sourbaki."

This group of mathematicians in order to create a mathematics or sets of mathematics beyond the capacity of any one individual, held meetings three times a year and exchanged ideas, then went off and worked separately. The resulting papers were published under a pseudonym because the products of this work were felt to be a group result beyond any one individual's contribution.

In the maximally attenuated environment (92 to 95 degrees F., isothermal sink, salt water suspension, zero light levels, near-zero sound levels, without clothes, without wall or floor contacts, in solitude in remote isolation, for several hours), the addition of LSD-25 allows one to see that all the previous experiences with "outside" and "screen" are equivalent to the "inside" of the individual as "screens" in the sense of "blocking the view behind," as well as "receiving the projected images".

The essential features and the goals sought in the self-analysis is the metaprogram "make the computer general purpose". In this sense we mean that in the general purpose nature of the computer there can be no display, no acting, or no ideal which is forbidden to a consciously willed program. Nor is any display, acting, or ideal made without being consciously programmed.

"Mathematical transformations" were next tried in the approach to the locked rooms. The concept of the key fitting into the lock and the necessity of finding the key was abandoned and the rooms were approached as "topological puzzles." In the multidimensional cognitive and visual space the rooms were now manipulated without the necessity of the key in the lock.

Once one has been through deep experiences in tune with the vast forces of the universe, the vast forces within ourselves, we see that the need for conflict, the need for hostility, and the need for hatred become less intense. One finds the universe inside and the one outside so vast and so lonely that any desire for loving living that loves or shows any signs of loving is precious and close.

The human participant's assumptions, i.e., those of Margaret C. Howe, in her own words are as follows:

1. Dolphins are capable of communication with man on the level of high intelligence.
2. Dolphins are not only capable of this communication but are eager for it and are willing to cooperate with man to achieve it.
3. Possibly the best way to go about establishing this communication is to set up a situation where the man (woman) and a dolphin live together as closely as possible for an extended period of time.
4. This is a long process and involves many steps, each of which must be recognized and encouraged. The attempt to communicate with a dolphin in English involves two main parts: (1) the dolphin must learn how to physically say the words, and (2) he must learn the meaning of what he is saying. These two parts may be worked out individually or simultaneously.
5. One first step is the creation and the maintenance of the mutual trust and reciprocal rewards one for the other



She filled the clothesline full, twenty yards of overalls and work shirts, sheets and towels and socks and underwear, a few dresses of her own, his own small clothes sprinkled in between. They hung there all afternoon, flapping in the wind like ghosts of an entire family.

Emmit coughed into the curtain of the dream. D.R. heard him in the kitchen, building a fire in the coal stove.

He could tell by the way Emmit handled the stove lids he was being as quiet as he could to keep from disturbing him. It was morning now and D.R. was awake before Emmit was. It was too dark yet to see but he heard him putting his clothes on across the room. He heard the door open on the screen door when he went outside to pee. Then he heard him in the kitchen building a fire and putting water on to boil, and D.R. lay there watching the room take shape as the dark gave way to the growth of light in the window.

Here he comes.



## Eye and Brain

*I can't think of another book as well-made as this one. It is well designed, illustrated, and diagrammed. The writing is excellent, the subject matter important and new. The book is inexpensive. Altogether Eye and Brain lets you see how crappy most books are.*

### Eye and Brain—The Psychology of Seeing

R. L. Gregory  
1966, 254 pp.  
\$2.45 postpaid  
from:  
McGraw-Hill Book Company  
Princeton Road  
Hightstown, N.J. 08520  
Manchester Road  
Manchester, Missouri 63062  
8171 Redwood Highway  
Novato, CA 94947

or WHOLE EARTH CATALOG

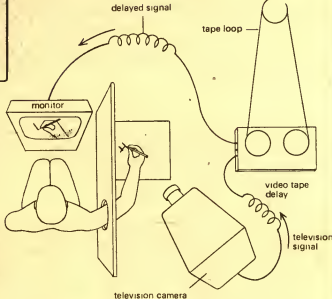
#### R. L. Gregory

Eye and Brain  
the psychology of seeing

15.45



—SB



An elaboration of the television technique makes it possible to displace retinal images not only in space, but in time. Temporal delay of images is a new kind of displacement, and promises to be of the greatest importance. The method is to use a TV camera and monitor, with an endless tape loop so that there is a time-delay between the recording from the camera and the playback to the monitor. The subject thus sees his hands (or any other object) in the past; the delay being set by the gap between the Record and Play-back heads.

This situation is not only of theoretical interest, but it is also of practical importance because controls used in flying aircraft, and operating many kinds of machine, have a delay in their action: if such delay upsets the skill, this could be a serious matter. It was found that a short delay (about 0.5 seconds) made movements jerky and ill co-ordinated, so that drawing became almost impossible, and writing quite difficult. Precision gives little or no improvement.

Heid found that only the active kitten developed perception, the passive animal remaining effectively blind. He thus suggested that active touch is essential to perceptual development.

Stratton went on to perform other experiments which though less well-known are just as interesting. He devised a mirror arrangement which, mounted in a harness, visually displaced his own body, so that it appeared horizontally in front of him, and at the height of his own eyes. Stratton wore this mirror arrangement for three days (about twenty-four hours of vision) and he reported:

"I had the feeling that I was mentally outside my own body.

It was, of course, but a passing impression, but it came several times and was vivid while it lasted. . . . But the moment critical interest arose, the simplicity of the state was gone, and my visible actions were accompanied by a kind of wrath of themselves in the older visual terms.

Why should the perceptual system be as active in seeking alternative solutions as we see it to be in ambiguous situations? Indeed it seems more active, and more intellectually honest in refusing to stick with one of many possible solutions, than in the cerebral cortex as a whole if we may judge by the tenacity of irrational belief in politics or religion. The perceptual system has been of biological significance for far longer than the calculating intellect. The regions of the cerebral cortex concerned with thought are comparatively juvenile. They are self-opinionated by comparison with the ancient strata area responsible for vision.

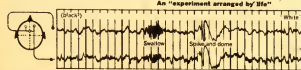
## Brain Storms

Dr. Barker presents a fascinating argument that epileptic fits and fits of creativity are very closely related and both are brought on by unusual threats to continuity in brain function, requiring a massive "storm" of reorganization in the brain. The fit is an attempt to in fact fit together incompatible considerations which have collided. I believe it, in part because Barker makes his case so well, in part because it sounds like what I've experienced.

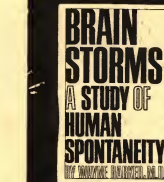
—SB

A fit, even the greatest major convulsive fit of epilepsy, is many things happening at once. Fits are patterns of awareness and action, combinations of knowing, feeling, and doing. They are episodes of behavior and experience put together by the brain during crises in the continuity of living. Such crises are characterized by a sudden coming together of a complex of conflicting and disparate ideas, images, and impulses; fits are syndromes of such complexes that both resolve and reorganize the otherwise unmanageable contradictions and ambiguities. By providing more or less fitting resolutions of crises, fits serve to maintain or restore the crisis-disrupted continuity of transactions between organism and environment.

184 The Concepts of Dysjunctive Situations



314 Sense Communications



Brain Storms—A Study of Human Spontaneity  
Wayne Barker, M.D.  
1968, 277 pp.

\$2.95 postpaid from:  
Groves Press, Inc.  
214 Marcor St.  
New York, N.Y. 10012

or WHOLE EARTH CATALOG

What we need is to let the fitting-together capacity of the human brain operate at least occasionally in freedom from the narrow provincial, egoistic concerns of "I" and "Us." The essence of our contemporary crisis is simple: Most people in the world want to have modestly human food, shelter, and an opportunity to care decently for their children. The technological and material means for satisfaction of these wants exist. Not much of a "dream" is required to get it done. No longer will any conventional evasion or caricatured "solution" suffice. The only possible outcomes now are compulsive or creative. It all depends upon our commitment.

## The Intelligent Eye

R. L. Gregory continues, this time with a book rich in visual illusions which suck the reader (viewer) into many a flickering illuminating trap. The thesis is that visual imagery is made intelligible by the eye itself. 3-D glass included with the book.

—SB



The Intelligent Eye  
Richard L. Gregory  
1970, 191 pp.

\$2.95 postpaid

from:  
McGraw-Hill Book Company  
330 W. 42nd St.  
New York, N.Y. 10036

or WHOLE EARTH CATALOG

2. This is seen sometimes as a face, sometimes as something else. Perception fluctuates between two clearly defined possibilities. This is an example of visual "reversal," by the Danish psychologist, Edgar Rubin.

Retinal images are patterns in the eye— patterns made up of light and dark shapes and areas of colour— but we do not see patterns, we see objects. We read from pictures in the eye the presence of external objects: how this is achieved is the problem of perception. Objects appear separate, distinct; and yet as pictures on the retina they may have no clear boundaries. In this photograph of a spotted dog, most half-tones have been lost (as in vision by moonlight) and yet we can distinguish the spots making up the dog from similar spots of the background. To make this possible there must be stored information in the brain, of dogs and thousands of other objects.



... if we can endure confrontation with the unthinkable, we may be able to fit together new patterns of awareness and action. We might, that is, have a fit of insight, inspiration, invention, or creation. The propensity for finding the answer—the lure of creating or discovering the new—no doubt has much to do with some people's ability to endure tension until something new emerges from the contradictory and ambiguous situation.

### xii Contents

- 27. "... I Know That I'm Happy"
- Fits of Gooseflesh, Shivering, the "Top of My Head Coming Off," and Other Reactions Precipitated by Poetic Versions of Uncanny Experience.
- 28. "... Thoughts Could Run My Mind... Whence Do They Come?"
- A Fit of Computing. A Creative Manifestation of a Dysjunctive Flow of Ideas.
- 29. Talking or Talking-Thinking Walls
- A Fit in Which a Major Convulsive Reaction Is Transformed into a Sequence of Anger, Coughing, Laughing, and Wit.
- 30. "Z. Y. W. Y. . ."
- A Fit of "Trying to See" the Answer to an Experimental Problem.
- 31. "Oh, Yeah? If You Know So Much, When'll the War Be Over?"
- A Fit of Unended Prophecy.
- 32. A Mental Sequence
- A Fit of Symbolization, Condensation, and Hallucination While Trying to Think.
- 33. Perception and Impulses
- The Interaction of Intention and Spontaneity in Complex Sequential Fits of Creation.
- 34. "And so I feel a vast Consciousness as of Something Progressing... Everything Had a Name"
- A Fit of Spelling, of Recognition, and of Sudden Fitting Together.

## Physical Control of the Mind

I do not like this guy. He has inoffensive hubris and he tramples on all my fondest notions about the independent life of the mind. The book is full of harsh physical evidence and harsh hypotheses that I have got to either surrender or accept (or quit).

—SB

Joseph M. R. Delgado, M.D.

Physical Control of the Mind  
Joseph M. R. Delgado, M.D.  
1969; 280 pp.

\$2.25 postpaid

from:  
Harper & Row, Publishers  
49 E. 33rd Street  
New York, N. Y. 10016

or WHOLE EARTH CATALOG

Pleasure in a full stomach, but  
caressed or in a stink can, but  
somewhere inside the cranial vault.

(1) Lack of predictability: When a point of the brain is stimulated for the first time, we cannot predict the effects which may be evoked.

(2) Lack of purpose: In some cases the evoked response is directed by the animal in a purposeful way, but the movements and sequential responses are usually out of context, and there is no reason or purpose for yawning, flexing a hand, or walking around, apart from ESB. . . . [Electrical Stimulation of the Brain]  
(3) No robot performance: Brain stimulation activates central mechanisms which are organized for motor performance, but it cannot replace them. With the present state of the art, it is very unlikely that we could electrically direct an animal to carry out predetermined activities such as opening a gate or performing an instrumental response. We can induce pleasure or punishment and therefore the motivation to press a lever, but we cannot control the sequence of movements necessary for this act in the absence of the animal's own desire to do so.

## The Machinery of the Brain

Some is known about the brain, but not much. Woolridge's book is the best into the subject we've seen. For richer detail, get Pribram's two-volume Brain and Behavior (each volume \$2.95 from Penguin, 7110 Ambassador Road, Baltimore, Md. 21207).

—SB

## The Machinery of the Brain

Dean E. Woolridge  
1963; 252 pp.

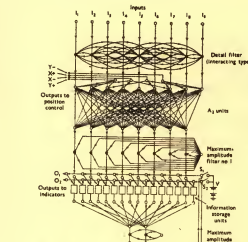
\$1.95 postpaid

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Hightstown, NJ 08520  
Manchester Road  
Manchester, Mo. 63062  
8171 Redwood Highway  
Novato, CA 94947

or WHOLE  
EARTH  
CATALOG



If monotonously repetitive stimuli are provided, such as a regular series of clicks or staccato tones, the nonspecific-brain-potential measurements will display the property of *habituation*: the pulse of brain potential induced by each audible stimulus will, with continuing repetition, gradually diminish and ultimately disappear. If we consider these nonspecific brain potentials as being somehow related to the degree of attention the subject is paying to the stimulus, their gradual decline correlates nicely with subjective experience: noises that initially interfere with concentration or keep us awake may ultimately recede into the background of our consciousness and lose their effectiveness if they are monotonous and repetitive in character. Such habituation must be regarded as another basic form of learning. It is in effect a kind of negative learning, perhaps antonymous to the essentially positive learning of conditioned responses. Habituation is found throughout the animal scale, from protozoa to man. The indication is that, as in the case of learning by conditioning, habituation derives from some fundamental property of nerve tissue and does not necessarily require special complex neuronal circuits.





## Design for a Brain

This is a reputation review. Ashby's book is found prominent in the bibliography and footnotes of every text we've seen on computers and the mind. It's technical going to read but worth it for the insights of prime work.

—SB

### Design for a Brain

W. Ross Ashby  
1952, 1959, 286 pp.

\$3.25 postpaid

from:  
Barnes & Noble, Inc.  
105 Fifth Avenue  
New York, N. Y. 10003  
Economy Bookstore  
171 W. Madison  
Chicago, Illinois 60602

or WHOLE EARTH CATALOG

This is the learning mechanism. Its peculiarity is that the gene-pattern delegates part of its control over the organism to the environment. Thus, it does not specify in detail how a kitten shall catch a mouse, but provides a learning mechanism and a tendency to play, so that it is the mouse which teaches the kitten the finer points of how to catch mice.

The development of life on earth must thus not be seen as something remarkable. On the contrary, it was inevitable. It was inevitable in the sense that if a system as large as the surface of the earth, basically polystable, is kept gently simmering dynamically for five thousand million years, then nothing short of a miracle could keep the system away from those states in which the variables are aggregated into intensely self-preserving forms.

Finding an optimum is a much more complex operation than finding a value that is acceptable (according to a given criterion). Thus, suppose a man comes to a foreign market containing a hundred kinds of fruit that are quite new to him. To find the optimum for his palate he must (1) taste all the hundred, (2) make at least ninety-nine comparisons, and (3) remember the results so that he can finally go back to the optimal form. On the other hand, to find a fruit that is acceptable he need merely try them in succession or at random (taking no trouble to remember the past), stopping only at the first that passes the test. To demand the optimum, then, may be excessive; all that is required in biological systems is that the organism finds a state or a value between given limits.

### Remarks on Ashby

RE: Chris Smith's letter, January Supplement p. 42

I must rally to the defense of a valuable information source: W. Ross Ashby. *Design for a Brain* may not satisfy those who seek physiological correlates of behavior but it is an excellent formulation of a very general adaptive system. It could also be called *Design for an Ecosystem*. I highly recommend, not only that you retain the listing, but that you add Ashby's *Introduction to Cybernetics*.

Ashby understands general systems & cybernetics and does a great job in careful explanation. *Intro. to Cybernetics* reviews all the math you need to understand the heavies like Shannon & Weaver.

General system theory is the new paradigm for understanding ourselves scientifically. It will eventually provide for the synthesis of science and machine systems like astrology and the I Ching. It's very important to have a clear understanding of the basics, and Ashby is an excellent place to start.

An *Introduction to Cybernetics* by W. Ross Ashby, \$5.75 trade edition, or \$3.95 paper text edition. From Barnes & Noble, Inc., 105 Fifth Avenue, NY, NY 10003.

Love,  
Ron Nigh  
Palo Alto, CA

### Brains, Machines and Mathematics

Take the theoretical-neuron work of McCulloch & Pitts, the Perceptron, von Neumann and Shannon's communication theory, Gödel's incompleteness theorem, and Wiener's cybernetics. Blend, and see how far along we are toward a "biological mathematics". The answer is not far; this is a tidy survey of how far we aren't.

[Suggested by Dave Evans]

### Brains, Machines and Mathematics

Michael A. Arbib  
1964, 152 pp.

\$1.95 postpaid

from:  
McGraw-Hill Book Co.  
Princeton Road  
Hightstown, N. J. 08520

Brains, Machines and Mathematics  
Michael A. Arbib

Manchester Road  
Manchester, Mo. 63002  
8171 Redwood Highway  
Novato, CA 94947

or WHOLE EARTH CATALOG

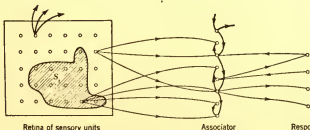


Figure 2.5 Schematic of a perceptron.

## Embodiments of Mind

I'm not competent to review this book. I can recognize McCulloch's wisdom and humor. I can report his high standing as an Old One in the field of brain research. I can assert I've revelled in some of his insights. But I can't tell you how far he takes us toward full accountability in how nerve nets yield mind, except that he makes the question appear answerable and worth answering.

[Suggested by  
Milton E. Boyd]

—SB

### Embodiments of Mind

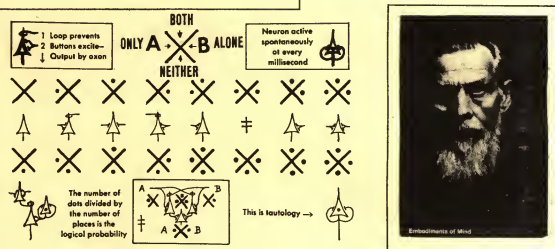
Warren S. McCulloch  
1965, 70, 402pp.

\$2.95 postpaid

from:  
The MIT Press  
50 Ames Street  
Cambridge, Massachusetts 02139

or WHOLE EARTH CATALOG

Modern evidence indicates that all our acquired ideas, or learned generalizations and specifications are carried on for nearly half an hour by regenerative activity, of which there is beginning to be some electrical evidence. If this activity is interrupted during that time, no memory remains. From the evidence to date it seems that if the process had not been interrupted, and if one looks at the appropriate neurons half an hour later, one finds that there is a great rise in ribonucleic acid, and protein synthesis is under way. So, while we do not yet know how or where this building material will be distributed, we may see nature using the same trick as in the immune reactions.



### Morgan's Tarot

Just as we were glad to see a guy invent a new language (all)—see Fall 69 CATALOG, we are delighted by this thoroughly practical tarot deck based on traditions dating back nearly eight years. Two years from now it will be unusable. Twenty years from now it will be as venerable as the medieval Tarot, if anybody notices. The main limitation I see with tarot cards, astrology, any language, is that the systems close on themselves. They offer no exit, except finally an attenuated exhaustion, frustration, possible cause to bust out. Some systems are more open, more immediately and fractionally self-frustrating science; evolution; human life... and the market, where these cards are for sale.

—SB

### Morgan's Tarot

\$3.50 postpaid

from:  
Morgan's Tarot  
Boulder Creek, CA 95006  
or WHOLE EARTH CATALOG



## An Introduction to Cybernetics

We are migrating from a world governed primarily by the laws of thermodynamics to a world governed primarily by cybernetics—*a* weightless world (Fuller says "metaphysical") whose events are the impinging of information on information, whose basis is survival and direction is growth. Thought, society, economics, media, evolution

The two main entries to understanding in this realm are *Norbert Wiener* (see pp. 16 & 307) and *Ashby*. *Wiener's* books are wide and more inspiring. *Ashby* is more thorough.

—SB

[Suggested by Dave Evans]

### An Introduction to Cybernetics

W. Ross Ashby  
1958; 295 pp.  
from: Barnes & Noble, Inc.  
\$3.95 postpaid 105 Fifth Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

\$2.16 postpaid from Blackwells, p. 2.

## Information

The September 1966 issue of *Scientific American* was devoted entirely to the new technology of information. Now available as a paperback book, it is the best introduction we've seen to computer science. Articles include: "Computer Logic and Memory," "Computer Inputs and Outputs," "Systems Analysis and Programming," "Time-sharing on Computers," "The Transmission of Computer Data," "The Uses of Computers in Technology," "The Uses of Computers in Organizations," "The Uses of Computers in Education," "Information Storage and Retrieval," and "Artificial Intelligence".

—SB

Information from: W. H. Freeman & Company  
1966; 218 pp. 650 Market Street  
\$2.50 postpaid San Francisco, CA 94104

or WHOLE EARTH CATALOG

The computer is almost exactly what man is not. It is capable of paying undivided attention to unlimited detail; it is immune to distraction, precise and reliable; it can carry out the most intricate and lengthy calculation with ease, without a flaw and in much less than a millionth of the time that would be required by its human counterpart. It is emotionless, or so we suppose. It suffers neither boredom nor fatigue. It needs to be told only once; thereafter it remembers perfectly until it is told to forget, whereupon it forgets instantly and absolutely.

AND	OR	NOT
A B C	A B C	A B
1 1 1	1 1 1	1 1
1 1 0	1 1 0	1 0
1 0 1	1 0 1	0 1
1 0 0	1 0 0	0 0

## Critical Path Method

Most construction I've been around was under conditions of "The rains are due next week" or "If we don't get the dome covered by the first snow, we've blown it for the winter." Time pressure. At the miraculously complete and on-time Expo 67 in Montreal the magic ingredient was CPM—Critical Path Method. It's the analysis of what must be done in sequence (foundation, then floor) and what can be done concurrently (while the foundation is being dug, the girls can cut the roof panels). The maximum necessary sequence is your minimum construction time, and is the critical path. Any delays on it slow down the whole operation. A clear CPM map, using now-standard symbols, can vastly simplify coordination. The technique is useful for any group operation that's time-bound. This book is the briefest clearest on CPM.

—SB

Critical Path Method from: Humanities Press, Inc.  
A. T. Armstrong-Wright 303 Park Avenue South  
1969; 113 pp. New York, N.Y. 10010

or WHOLE EARTH CATALOG

\$3.00 postpaid

Thus there exist factors, such as "height of threshold" or "proportion of variables constant", which can vary a large system continuously along the whole range that has at one end the totally-joined form, in which every variable has an immediate effect on every other variable, and at the other end the totally-unjoined form, in which every variable is independent of every other. Systems can thus show more or less of "wholeness".

This earth contained carbon and other necessary elements, and it is a fact that many combinations of carbon, nitrogen, and a few others are self-reproducing. It follows that though the state of "being lifeless" is almost a state of survival, yet this equilibrium is unstable, a single deviation from it being sufficient to start a trajectory that deviates more and more from the "lifeless" state. What we see today in the biological world are these "autocatalytic" processes showing all the peculiarities that have been imposed on them by two thousand million years of elimination of those forms that cannot survive.

The organisms we see today are deeply marked by the selective action of two thousand million years' attrition. Any form in any way defective in its power of survival has been eliminated; and today the features of almost every form bear the marks of being adapted to ensure survival rather than any other possible outcome. Eyes, roots, cilia, shells and claws are so fashioned as to maximize the chance of survival. And when we study this brain we are again studying a means to survival.

One way of blocking the flow from the source of disturbance D to the essential variable E1 is to interpose something that acts as a simple passive block to the disturbances. Such is the torus's shell, which reduces a variety of impacts, blows, bites, etc. to a negligible disturbance of the sensitive tissue within. In the same class are the tree's bark, the seal's coat of blubber, and the human skull.

At the other extrema from this static defense is the defense by skilled counter-action—the defense that gets information about the disturbance to come, prepares for its arrival, and then meets the disturbance, which may be complex and mobile, with a defense that is equally complex and mobile. This is the defense of the fencer, in some deadly duel, who wears no armour and who trusts to his skill in parrying. This is the defense used mostly by the higher organisms, who have developed a nervous system precisely for the carrying out of this method.

What is an amplifier? An amplifier, in general, is a device that, if given a little of something, will emit a lot of it. A sound-amplifier, if given a little sound into a microphone will emit a lot of sound. And a money-amplifier would be a device that, if given a little money, would emit a lot.

Such devices work by having available a generous reservoir of what is to be emitted, and then using the input to act as controller to the flow from the reservoir.

## Systems Thinking

Well, this should be in "Understanding Whole Systems". It's an excellent introduction to systems theory. It's here so you can connect it up with cybernetics and your own bodily and social open-system functioning. In the light of systems thinking statements like "He not busy being born is busy dying" have precise truth.

—SB

### Systems Thinking

E. E. Emery, ed.  
1969; 398 pp.  
\$3.00 postpaid

from: Penguin Books, Inc.  
7110 Ambassador Rd.  
Baltimore, Md. 21207  
3984 55th St.  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

In physics, the theory of open systems leads to fundamentally new principles. It is indeed the more general theory, the restriction of kinetics and thermodynamics to closed systems cannot enter rather special case. In biology, it first of all accounts for many characteristics of living systems that have appeared to be in contradiction to the laws of physics, and have been considered hitherto as vitalistic features. Second, the consideration of organisms as open systems yields quantitative laws of important biological phenomena.

It is events rather than things which are structured, so that social structure is a dynamic rather than a static concept. Activities are structured so that they comprise a unity in their completion or closure. A simple linear stimulus-response exchange between two people would not constitute social structure. To create structure, the responses of one would have to elicit B's reactions in such a manner that the responses of the latter would stimulate A to further responses.



But the rim of his cup finds his mouth in there somewhere and he drinks.

And then he wipes his mouth and drinks again.

"I'm awake."

Emmit raises

Emmit lifts his head, like a bird alerted.

He raises his bearded head and looks at his nephew in the big bed across the room.

He looks. For a long time he looks, and doesn't speak.

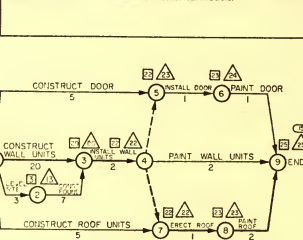
But then he lifts his cup in a neat salute and says you had a right smart of sleep, old bud. How long

How long have I been sleeping? D.R. asks.

About a day.

Then silence. Do I remember coming here?

Simulated waterfall spills over the edge of a cliff and splashes into a pool in this computer experiment performed by John P. Shannon at the Los Alamos Scientific Laboratory as part of a study of dynamic behavior of fluids with the aid of numerical models.



In the above example, the required time for completing the project is 25 days and the project end-event time is calculated as "day 25". Assume that the owner is anxious to complete the garage before a new car is delivered on "day 15". It will thus be necessary to reduce the critical path by 10 days if this scheduled date is to be achieved. In this case it may be a simple matter of doubling the labour on activity 1-3 "Construct wall units" in the hope of reducing the duration by 10 days.

For example of CPM in use, see p. 300.



## Mathematics

As far as we're concerned, these are the pick of self-education math books. From them you can learn delight as well as method in the universal language.

**Mathematical Snapshots operates by visibility. What's going on mathematically is plain as day in the diagrams and illustrations. It's like learning history by anecdotes.**

**Mathematical Models is a classic of 4-D technique. The whole purpose of the book is enabling you to make your own geometric forms in the world. Like learning history by psychodrama.**

[Suggested by Sim Van Der Ryn]

**The World of Mathematics (5 history and anecdotes, an infectious multi-faceted telling of math stories—pure, applied, ancient, recent: a fine and complete collection. Math seen from outside.**

**Mathematics: Its Content, Methods, and Meaning. Math from inside. A Russian-compiled technical run-down of everything of concern in mathematics today.**

**The Graphic Work of M. C. Escher is geometry set at its own throat via the images of dreams. The subjective frontier.**

**The New Mathematics Dictionary and Handbook is the handiest of handy reference books.**

[Suggested by Lloyd Kahn]

—SB

### Mathematical Snapshots

H. Steinhaus  
1950, 1969; 311 pp.

\$7.50 postpaid

from:  
Oxford University Press  
16-00 Pollitt Drive  
Fair Lawn, N. J. 07140

or WHOLE EARTH CATALOG

### Mathematical Models

H. Martyn Cundy & A. P. Rollett  
1961; 286 pp.

\$6.50 postpaid

from:  
Oxford University Press  
16-00 Pollitt Drive  
Fair Lawn, N. J. 07140

or WHOLE EARTH CATALOG

### 3.9.4. Great stellated triacontahedron. $V(3, 4)^2$

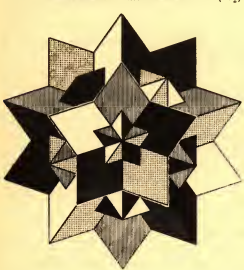


FIG. 152

The exterior perimeter of a net of a polyhedron which is in one piece becomes a 'tree' of edges on the solid. This tree may be branched, but every edge is double and occurs twice on the perimeter of the net. It is evident that if these edges are numbered consecutively round the net every even edge will be joined to an odd edge in the final solid. This means that tabs need only be attached to the even edges. In the nets which follow, tabs are not shown unless there is special need to do so. In all other cases the rule is: attach tabs to alternate edges round the net.

There is an exception in the case of the last face, which is best left free of tabs. The missing tabs must be added to the other edges, and are best made large, so that a platform can be built up to which the last face can be stuck.

318 Math Communications

PLAN:

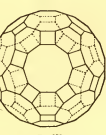


FIG. 150

Y, Y, Y, Y, Y, Y  
30 20 12 120 180

POLYHEDRA

Obviously, for any model which is to be all permanent, cardboard will be used.

The card should be white with a good surface, and fairly thin, about the thickness of a plain postcard. Thick cardboard makes ugly corners, and allowance ought to be made for its thickness in drawing the net. It is useful, however, to cut flat sheets of thick card for internal strengthening in some of the stellated end-interpenetrating polyhedra.

AS

POLYHEDRA

3.7.12. Great rhombicuboctahedron (rot.)

NET:

FIG. 151

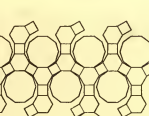


FIG. 151

When the dimensions of the model have been decided on, the net can be constructed on the cardboard. In the case of a complicated net this is facilitated by pricking through vertices from a template drawn on tracing paper, but it must be done very accurately. Tabs are then added to alternate outside edges, care being taken to ensure that the angle at the shoulder of the tab is small enough to admit of the tab's being cemented to its appropriate face. The net can now be cut out with a razor-plate and the edges scored half-through for bending. (Where edges have to be scored on the back—in the stellated polyhedra—this is indicated in the diagrams.) The face of the net becomes the outside of the polyhedron.

For joining, a quick-drying cement, such as balsam-cement as used for model aircraft, is essential. After the cement has been applied to a tab, the edges to be joined are brought together, and the tab can be held down with a small wire paper-fastener while the cement dries. This is particularly useful in small models when the fingers cannot easily get inside, and near the finish of any model when there are several edges to be joined at once. A thin wire probe is sometimes useful in getting the last face to adhere.

### 2.5. Curve-Stitching

One very old method of expression work in mathematics, and one which affords a welcome change from 'the tyranny of pencil and paper', is that of curve-stitching. It seems to have originated in a book by Mrs. E. L. Somerville, entitled *A Rhythmic Approach to Mathematics* and published in 1906. The idea has recently been revived, both in America and in this country. Basically it consists of constructing straight-line envelopes by stitching with coloured threads through a pattern of holes pricked in cardboard.

The patterns we observe on the shore of a river when the mud has been dried up by the sun (198) seem to be quite irregular; nevertheless as a rule they show right angles. This can be explained by assuming the cracking to be an effect of contraction; the line appearing as a fissure has, by a principle of mechanics, to make the work of disjunction as small as possible. The work is proportional to the areas of the sections and the lines must have a course such as to minimize the surfaces laid open by the fissure. This procedure gives right angles if the clay is homogeneous; the varying thickness of the layer accounts for the curvature of the lines. This remark supplies in many cases a means of deciding which line appeared earlier and which later: the order of the two splits passes right through the point of junction. Thus we can follow the genealogy of splits and eventually find the ancestors of the whole system.



Suppose the pattern was composed initially of two regions, A, and B. A new line appears joining two points of two already existing arcs and giving rise to a new region C (100); since the new line breaks up two arcs into two parts each, the number of arcs increases by three. After  $n$  steps we have  $n$  more regions and  $3n$  more arcs. Since there were initially two regions and three arcs, we now have  $n+2$  regions and  $3n+3$  arcs.

### Mathematics: Its Content, Methods, and Meaning

A. D. Aleksandrov, A. N. Volynskiy, R. A. Lavrent'ev  
1956 1963; 1144 pp.; 3 vols.

\$10.00 postpaid

from:  
The M. I. T. Press  
Cambridge, Mass. 02142

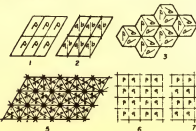
or WHOLE EARTH CATALOG

III. There exists neither a point nor a line in the plane that is carried into itself under all the transformations of the group. Groups of this type are called *plane Fedorov groups*. They are the symmetry groups of infinite plane ornaments. There are altogether 17 of them: five consist of motions of the first kind only, and twelve of motions of the first and second kind.

In Table 3 we have given examples of ornaments corresponding to each of the seventeen plane Fedorov groups; every group consists of precisely those motions that carry an arbitrary flag drawn in the diagram into any other flag of the same diagram.

It is interesting to note that the masters of the art of ornamentation have in practice discovered ornaments with all possible symmetry groups: it fell to the theory of groups to prove that other forms do not exist.

**Crystallographic groups.** In 1890 the eminent Russian crystallographer and geometer E. S. Fedorov solved by group-theoretical methods one of the fundamental problems of crystallography: to classify the regular systems of points in space. This was the first example of a direct application of the theory of groups to the solution of an important problem in natural science and made a substantial impact on the development of the theory of groups.



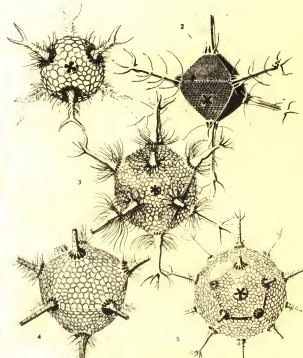
The World of Mathematics  
James R. Newman

World of Mathematics  
James Newman  
1956; 2469 pp; 4 vols.  
\$14.95 postpaid

from:  
Simon & Schuster, Inc.  
630 Fifth Avenue  
New York, N. Y. 10020

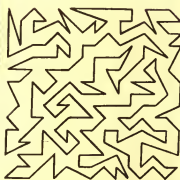
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...As our mental eye penetrates into smaller and smaller distances and shorter and shorter times, we find nature behaving so entirely differently from what we observe in visible and palpable bodies of our surrounding that no model shaped after our large-scale experiences can ever be 'true'. A completely satisfactory model of this type is not only practically inaccessible, but not even thinkable. Or, to be precise, we can, of course, think it, but however we think it, it is wrong; not perhaps quite as meaningless as a 'triangular circle,' but much more so than a 'winged lion.'



Here (Figure 45) is a page from Haeckel's *Challenger*. Monograph showing the skeletons of several Radiolarians. Numbers 2, 3, and 5 are octahedron, icosahedron, and dodecahedron in astonishingly regular form. 4 seems to have a lower symmetry.

1. This Book has 597 Pages
2. The Author of this Book is Confucius.
3. The Statements Numbered 1, 2, and 3 are all False.



Problem 36 of the papyrus begins: "Go down 1 times 3, 1/2 of me, 1/5 of me is added to me; return 1, filled am I. What is the quantity saying it?"

FIGURE 10—Which points of the plane are inside this polygon?

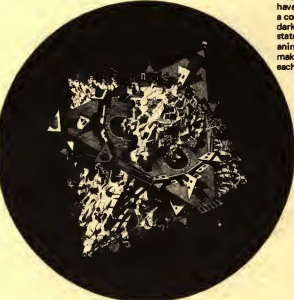


# The Graphic Work of M. C. Escher

M.C. Escher  
1960/68: 76 plates  
\$3.95 postpaid

from:  
Hawthorn Books, Inc.  
70 Fifth Avenue  
New York, N. Y. 10011

or WHOLE EARTH CATALOG



M. C. ESCHER



57, DOUBLE PLANETOID, wood-engraving, printed from 4 blocks, 1949, diameter 37.5 cm

Two regular tetrahedrons, placing each other, float through space as a planetoid. The light-colored one is inhabited by human beings who have completely transformed their region into a complex of houses, bridges and roads. The darker tetrahedron has remained in its natural state, with rocks, on which plants and prehistoric animals live. The two bodies fit together to make a whole but they have no knowledge of each other.

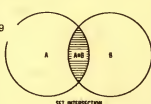
The New Mathematics Dictionary and Handbook  
Robert W. Marks  
1964; 186 pp.  
\$.95 postpaid

The New Mathematics Dictionary and Handbook

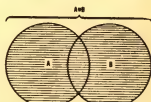


from:  
Bantam Books, Inc.  
666 Fifth Ave.  
New York, N. Y. 10019

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The shaded area represents that set of all elements that are both elements of A and elements of B.  
Example: If A is the set of all students who take chemistry, and B is the set of all students taking physics, the shaded area is the set of all students taking both chemistry and physics.



The shaded area in the second diagram represents the set of all elements that are in A, or in B, or in both A and B.  
Example: If A is the set of all men who own boats, and if B is the set of all fishermen, the shaded area indicates the set of all men who are boatowners or fishermen, or who are boat-owning fishermen.



## Number Words and Number Symbols

There's lots of ways to invent things—two big ones that this CATALOG promotes both involve the return to rudiments, but in different ways. Invention-By-Usefulness is People's invention—a flock of people go live a different way: the new methods that arise to aid their different living are their inventions (subject to no prices, patents, marketability, or even notice usually). Invention-By-Inventor, on the other hand, involves a double perception by an individual—he perceives a potential usefulness for something, and he perceives the roots of a set of tools that may be adapted or combined to perform the new usefulness.

"Academic" study, of little use to the flock of pioneers, is essential to the inventor, especially the study of the origins of crafts he's working in. Take numbers. Suppose you want to help human communication to re-understand itself. So much of that understanding is wrapped up in numbers that if you penetrate the one you may have a foothold to tweak the other onto a new course. Invent language and you invent man.

This book penetrates numbers.

## Number Words and Number Symbols

Karl Menninger  
1958, 1969; 480 pp.

\$15.00 postpaid

from:  
The M. I. T. Press  
Cambridge, Mass 02142

or WHOLE EARTH CATALOG



Fig. 222 Chinese fork coin, with the number 34 written in abraded place-value notation. C.A. 20.

In the seaports and market places of the Red Sea, Arabia, and East Africa, merchants have evolved a finger language that is understood in every market of every country in the world. Buyers and sellers come to terms underneath a cloth, a fold of garment or a strip of muslin from a turban, by touching the fingers of each other's hand and thus bargaining in complete privacy.

## Indices Information Retrieval System

What do you have a lot of? Students, subscribers, notes, books, records, clients, projects? Once you're past 50 or 100 of whatever, it's tough to keep track, time to externalize your store and retrieve system. One handy method this side of a high-contrast computer is indices. It's funky and functional: cards with a lot of holes in the edges, a long blunt needle, and a notcher. Run the needle through a hole in a bunch of cards, lift, and the cards notched in that hole don't rise; they fall out. So you don't have to keep the cards in order. You can sort them by feature, number, alphabetically or whatever. Just poke, fan, lift and catch. Indices is cheaper than the McBee system we used to list.

We've used the McBee cards to manipulate (edit) and keep track of the 3000 or so items in this CATALOG. They're meant the difference between partial and complete insanity.

—SB

[Suggested by Ernest L. Gayden]

## Catalog

free from:  
Indices  
Arlington, Vt. 05250

PAPER/THESIS DECKS @ \$9.75  
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**320** Organization  
Communications

When Buddha reached the age of manhood he courted Gopa, the daughter of the Prince Danadipa. But he would be rejected unless he could show proof of his abilities. And so, together with five other suitors, he was put through trials in writing, wrestling, archery, running, swimming, and number skills. In all these contests he brilliantly defeated his rivals. After the competition, Gopa's father commanded him to pit himself against the great mathematician Arjuna, who was to be the measure of Buddha's knowledge. Arjuna instructed him to list all the numbers (that is, the numerical ranks) above 100 millions. Kori was the name of the seventh rank, meaning 100 or 10 millions. Beyond sahasra (10<sup>3</sup>), Indians at an early date had ayuta (10<sup>4</sup>), niuta, also called lakhs (10<sup>5</sup>), and prayuta (10<sup>6</sup> = a million).

Buddha answered:

koti (10<sup>7</sup>, abbreviated 7)  
ayuta = 100 kotis (33)  
niyuta (11)  
kangkara (13)  
vivara (15)  
akobhya (17)  
vishva (19)  
utanga (21)  
bahula (23)  
nagabala (25)  
tilanibha (27)  
vyavesthanagradjaneptri (29)

hetuhile (31)  
karahu (33)  
Hindrevindye (35)  
samapralambha (37)  
ganaganagati (39)  
niravadya (41)  
mudrabala (43)  
saravala (45)  
visandighani (47)  
sarvasandina (49)  
vibhutangama (51)  
talak Sana (53)

Fig. 242 Albrecht Dürer's year dates. In writing the dates of the years around 1495, Dürer illustrated the development of the 4 into its present form. From three of his drawings dated in successive years.

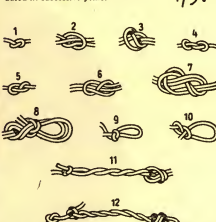
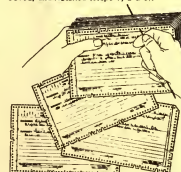


Fig. 90 Miller's knots used to indicate amounts and kinds of flour.

1 2 3 4 5 6 7 8 9 and 0 — these ten symbols which today all peoples use to record numbers, symbolize the world-wide victory of an idea. There are few things on earth that are universal, and the universal concept which men has successfully established are fewer still. But this is one boast he can make: The new Indian numbers are indeed universal.

Sorting allows you to retrieve the information that has been Recorded, Coded, and Notched (Steps 1, 2 & 3).



THE CARDS YOU WANT HAVE BEEN RETRIEVED

Align the Deck at the clipped corners...

Pass the Sorting Rod through the hole with the number which matches the listed code number of the category you wish to retrieve...

Shake gently...and all cards notched at this hole will drop.

## Handbook of Mathematical Functions

Designed for the person who needs but does not have access to powerful computer facilities, this Government bargain is a modernized version of the classical tables of functions of Jahne-Emde.

[Suggested by Mrs. W. B. Mohin]

## CONTENTS

- Mathematical Constants
- Physical Constants and Conversion Factors
- Elementary Analytic Functions
- Elementary Transcendental Functions
- Logarithmic, Exponential, Circular and Hyperbolic Functions
- Exponential Integral and Related Functions
- Gamma Function and Related Functions
- Error Function and Fresnel Integrals
- Bessel Functions of Integer Order
- Bessel Functions of Fractional Order
- Integrals of Bessel Functions
- Struve Functions and Related Functions
- Confluent Hypergeometric Functions
- Coulomb Wave Functions
- Hypergeometric Functions
- Jacobi Elliptic Functions and Theta Functions
- Elliptic Integrals
- Weierstrass Elliptic and Related Functions
- Parabolic Cylinder Functions
- Mathieu Functions
- Spheroidal Wave Functions
- Orthogonal Polynomials
- Bernoulli and Euler Polynomials, Riemann Zeta Function
- Combinatorial Analysis
- Numerical Interpolation
- Differentiation and Integration
- Probability Functions
- Miscellaneous Functions
- Tables of Notation
- Laplace Transforms

## Regular Polytopes

shel kaphan, mathematician, boy wizard, bookkeeper, bicyclist, alpinist, shel kaphan recommended this, as an old standard for mathematical model builders.



Regular Polytopes  
H.S.M. Coxeter  
1948, 63, 321pp.  
\$4.95 postpaid

from:  
Crowell Collier and MacMillan  
885 Third Avenue  
New York, New York 10022  
or WHOLE EARTH CATALOG

A honeycomb is said to be quasi-regular if its cells are regular while its vertex figures are quasi-regular. This definition (cf. #2.3) implies that the vertex figures are all alike, and that the cells are of two kinds, arranged alternately. To find what varieties are possible, we have the same two alternative methods as in #4.6. Either we seek (as cells) two different regular polyhedra whose respective dihedral angles have a submultiple of  $2\pi$  for their sum; these can only be a tetrahedron and an octahedron, where the sum is  $\pi$ . Or we look at the possible vertex figures, admitting the cuboctahedron, whose edge is equal to its circum-radius, and discarding the icosidodecahedron (for which the ratio of edge to circum-radius is  $2\sin \pi/10 = 2\sin \pi/10 \cdot 2\cos \pi/10 = 2\cos \pi/5$ ). From either point of view, we conclude that there is only one quasi-regular honeycomb. Each vertex is surrounded by eight tetrahedra and six octahedra (corresponding to the triangles and squares of the cuboctahedron).

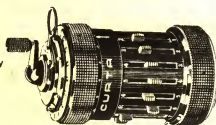
## Curta Calculator

The Curta Calculator (made in Lichtenstein, no less) is one of those machine things that it would be nice to just have one around because it is so beautiful. It's tiny, but made in a way that discourages errors. It'll take poor climates without failure. Adds, subtracts, multiplies, divides, squares, cubes, takes square root, accumulates multiplications, multiplies or divides by constants. Really navigators dig em, but so will anyone that needs a small calculator. Super in every respect. I've never talked to anyone that would part with his. Two models, \$125 and \$165, both about 2-1/2" x 3-1/2".

[Suggested and reviewed by Jay Baldwin]

## Literature

free from:  
The Curta Company  
Van Nuys, CA



Handbook of Mathematical Functions With Formulas, Graphs, and Mathematical Tables  
1964, 1968; 1046 pp.

\$4.50 postpaid

from:  
Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402



## Basic Graphics

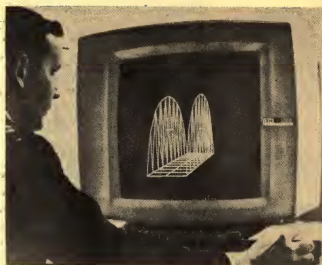
Comprehensive treatment of design graphics—tools, geometry, projection, graphs etc.—with good updating on use of computer graphics.

Basic Graphics —SB

Warren J. Luzzadder  
1957, 1962, 1968, 641 pp.

\$11.50 postpaid

from:  
Prentice Hall, Inc.  
Englewood Cliffs, N. J. 07632  
or WHOLE EARTH CATALOG



One can not ignore the fact that graphics now serves as a language for communication between man and computer.

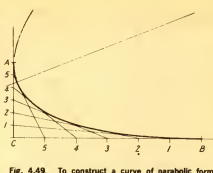


Fig. 4.49 To construct a curve of parabolic form.



## Design and Planning 2

Incredible: you actually got your hands on a computer powerful enough to generate rich graphics, and you have an employer/patron rich enough to buy you some play time on the computer. In order not to waste his money too idly splashing around in your new pool, you might check this book for a beginning inventory of some of the things you and your computer can accomplish together. It's far the most practical book we've seen on the subject, and the subject is what wizards are about. —SB

[Suggested by Eric Renner]

### Design and Planning 2

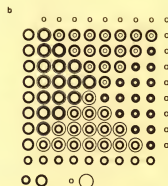
Martin Krampen and Peter Seitz, eds.  
1967, 177 pp.

### OUT OF PRINT

Hastings House, Inc.  
10 East 40th Street  
New York, N. Y. 10016



Function	Remarks
TURN	3 axis rotation
PAV. (VIEW) MODE	3 axis translation
PERSPECTIVE PROJECTION	Geometric transformations
STRETCH	2 axes
SCALE	Geometric projection
COLOR	Optics density variations, shading
SHADE	Mathematical color with the image plane
MOVE	Translation in 3D with the image plane
ROTATE	Rotation in 3D with the image plane
WAVE	Wave-like patterns
ATTACH	Attach a new image to the data
CONNECT	Connect a new image to the data
SMOOTH	Smooth a new image to the data
MIX	Mix a new image to the data
CHARTER	Chart a new image to the data
IMAGE	Image a new image to the data
WHITE	Prepare for test



## The Architecture Machine

A book of beginning efforts to domesticate computers. Good intro to life with dumb-fuck genius machines. —SB

### The Architecture Machine

Nicholas Negroponte  
1970, 153 pp.

\$5.95 postpaid

from:  
MIT Press

Cambridge, Mass. 02142

or WHOLE EARTH CATALOG

There are three possible ways in which machines can assist the design process: (1) current procedures can be automated, thus speeding up and reducing the cost of existing practices; (2) existing methods can be altered to fit within the specifications and constitution of a machine, where only those issues are considered that are supposedly machine-compatible; (3) the design process, considered as evolutionary, can be presented to a machine, also considered as evolutionary, and a mutual training, resilience, and growth can be developed.

I shall consider only the third alternative and shall treat the problem as the intimate association of two dissimilar species (man and machine), two dissimilar processes (design and computation), and two intelligent systems (the architect and the architecture machine). By virtue of ascribing intelligence to an artifact or the artificial, the partnership is not one of master and slave but rather of two associates that have a potential road a desire for self-improvement.

Professor: What time is it?

Computer: I did not catch the last word. Or was it two words?

Professor: What is the time?

Computer: The dime is a copper coin worth one-tenth of a dollar.

The word derives from the Latin decem, meaning...

Professor: No. No. What is the time? The time?

Computer: It is 8:30 a.m., Thursday, December 6, 1965. We have been having some trouble with your linguistics recently. Sometimes I can't tell your d's from your t's. Let's practice them. Watch the display screen for the intonation pattern, and repeat after me:

Teddy's daddy toted two dead toads to Detroit.

Professor: Teddy's daddy toted...



But there is just the silence of the old decaying room at early morning, no motion and no swirl. Just still and cool, the old uncle sitting on one bed, the young nephew lying in the other, craving something to drink now, feeling the pulse begin to quicken as he comes again into the world.

He says, I believe I'll have me a cup of that tea, Uncle Emmitt.

And Emmitt says this just hot water I'm drinking. I'll go fix you some tea.

I can

I can do it.

But Emmitt is up

He's already up and gone to the kitchen to stir the fire and put the water on while he dies.

Computer Design  
Communications

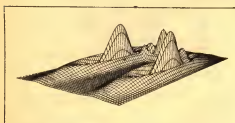
321



## Cybernetic Serendipity

This book started life as an exhibit at the Institute of Contemporary Arts in London last year. Simultaneously it was an issue of Studio International magazine. It must have been an Event. Certainly it is the best collection of computer art yet, the only one not dismissable as engineers kidding themselves. There's been talk for years (e.g. The New Landscape, 1955) of how art and science are gonna come together, and indeed communications have improved. But there was no direct avenue, no real mutual domain. Not until computers got common enough for funky hands to lay hold of them to do tricks for funky heads. That's happening now, and this book is good evidence. Ahead, deep space

—SB



[Art, if you want a definition of it, is criminal activity, it conforms to no rules. Not even its own. Anyone who experiences a work of art is as guilty as the artist. It is not a question of sharing the guilt. Each one of us sits at it.]



## Desk-top Calculators

The Hewlett-Packard 9100A is now \$4400. If you have to deal with problems which require a considerable capacity then the Wang 700 should be a great deal better than the HP since its total memory under program control (core plus tape) will be about 70 times as much as HP's. For people that order a 700 before it is being produced Wang lists a 370 with two card readers, a system which in some ways is already better than the HP. Such a 370 system costs \$4700. Deficiencies of 370 compared with HP:

### Much slower

Does not have wired in programs for trig functions and some other functions (but programs can be fed in on cards)

Can not handle as wide a range of numbers (only from about  $10^{-10}$  to  $10^{10}$  instead of nearly  $10^{-100}$  to  $10^{100}$ )

Much less convenient to wire and correct programs

Results of a computation cannot be read out onto a magnetic card or tape for later use (this can be done on the HP)

Not as good a display

### Advantages of 370 compared with HP:

Greater capacity (28 registers compared to 16 for HP with no program, with 160 steps)

program 370 still has 28 registers but HP has only 7

—160 steps is maximum

size program for 370 with two card readers without

feeding cards in manually,

compared to 196 for HP

but another card reader

would bring it up to 240)

Ability to use subroutines (but

not subroutines within

subroutines)—with HP a

subroutine must be

rewritten every place it

is used in the main program

this using up previous

capacity.

The 700 should be as good or better in all

these respects, except the display, as well

as having some other big programming

advantages—particularly indirect addressing

of registers in which the computer decides

which register to go to thus saving much

space as well as making programs easier

to write.

(Reviewed by Craig Schensted, 1969)

## Cybernetic Serendipity

1969; 100 pp.; 280 illustrations

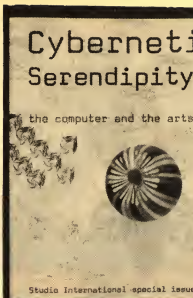
\$9.95 postpaid

from: Frederick A. Praeger, Publisher

111 Fourth Avenue, New York, N.Y. 10003

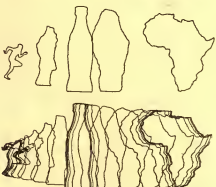
or WHOLE EARTH CATALOG

- 1 Poem  
sore deep in the ice  
I paint all time in a whorl  
puff the sludge has cracked
- 2 Poem  
sore deep in the ice  
I see gelled time in a whorl  
puff the sludge has cracked
- 3 Poem  
all green in the leaves  
I smell dark pools in the trees  
crash the moon has fled
- 4 Poem  
all white in the buds  
I flash snow peaks in the spring  
before the sun has fogged



Studio International special issue 254

To co-operate or even to orient themselves and to engage their programmes, the mobiles must communicate. They do so in a simple but many-levelled language of light flashes and sounds. You may engage in this discourse if you wish to, though your goals may be alien to the goals of the mobiles; for example, you might be trying to achieve a configuration that you regard as pleasing.



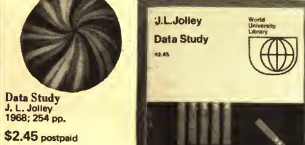
Running circle is Africa

A sustained image of the visual world around us is maintained by the brain's continual coordination of a great flux of varying sensory input. Much of this co-ordination is achieved by the series of voluntary and involuntary eye-movements which serve to scan the image of the pattern across the retina. When these eye-movements are eliminated or controlled, a remarkable collapse of the perceptual process occurs in which visual patterns disintegrate—but in non-random fashion, and according to 'rules' which appear to be common to all humans. The device, which we have called the CYBERNETIC INTROSPECTIVE PATTERN-CLASSIFIER—because that is as good a description as any—is not really the exhibit itself: it is by means of this device that the human brain can be turned into its own exhibit. People looking into the CIPC will be given a brief, bright flash of a pattern which plants an image on the retina in such a way that it can be seen, with eyes closed, for one or two minutes. Since the image is fixed on the retina, eye movements are irrelevant, and the perceptual system collapses as described above. The pattern can be seen to fragment and change its form, and these forms are probably the basic perceptual units used by the brain in recognising the pattern. This exhibit therefore allows people to watch their own cerebral processes actually in action.

## Data Study

Information that isn't organized isn't signal in your life, it's noise. You waste yourself searching the full length of a file for something, feeling as stupid as a driver in cross-town New York, and for the same reason: your access is brute linear and laborious. This book can help you if not free you. It presents theory and practice on how to keep stuff straight, at least in terms of organization. Display is another matter, however, in which the information sciences are still poor.

—SB



Data Study

J.L. Jolley

1968; 254 pp.

\$2.45 postpaid

from: McGraw-Hill Book Company  
Princeton Road  
Hightstown, N.J. 08520

Manchester Road

Manchester, Missouri 63062

8171 Redwood Highway

Novato, California 94947

or WHOLE EARTH CATALOG

The decimal system of numerals begins with 0, if its ten characters are arranged in ascending order. Binary, octal, and other systems also begin with 0, for 0 is the origin, zero, the place we start from before some change in the situation gives us some information.

a change, whose handling is the topic of this book, is generated by information, and whatever is our unit of change is our unit of information.

a mutually exclusive set	an overlapping set	a cumulative set	an equivalent (identical) set
hotel is: in France in Spain in the United States in Germany in Switzerland	hotel possesses: a ballroom tennis courts a swimming pool a bowling green a skittle alley a golf course	hotel is: more than 50 years old more than 100 years old more than 200 years old	hotel has: first class food excellent cuisine top quality refreshments

## Intelligent Computers

I've been bumming around the country lately, trying to see where I would lead me. And of course one of the places I eventually would up inside my own head, the primary content of which is a lot of scientific information that I'd never really sorted through before.

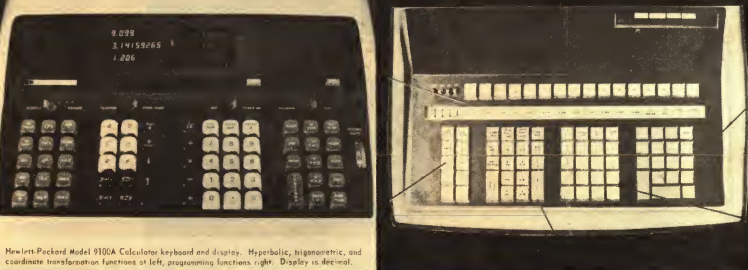
My latest flash was about computers, which I do know a little about already. Specifically about intelligent computers, which nobody knows anything about. It involved assembling what I know about neurochemistry (my main field of scientific interest) with a lot of stuff about animal behavior psychology and the history of the development of mathematics and a dash of Zen. The result was that I scared the shit out of myself and quit before I had translated it all into machine language, which I don't know anyway.

The point is that it is too valuable to lose and too powerful to let IBM or the Pentagon come up with it on their own, especially since it looks like the only way an intelligent computer could remain sane would be if it believed itself to BE the planet earth.

I would like to sit down with a bone fide computer genius with an island psychology and a bit of stock in the human race and try to work this thing through with him.

Ken Colstad  
Hardin, Montana

I know just the man, Ken Colstad. —S.B.



Hewlett-Packard Model 9100A Calculating Keyboard and Display. Hyperbolic, trigonometric, and coordinate transformation functions at left, programming functions right. Display is decimal.

Hewlett-Packard information from:  
P. O. Box 301  
Loveland, Colorado 80537

Wang information from:  
Wang Laboratories, Inc.  
636 North Street  
Tewksbury, Mass. 01876

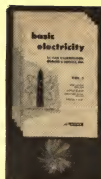
**Basic Electricity**  
Van Valkenburgh, Nooger & Neville, Inc.  
1954; 579 pp, 5 vols.

**\$13.50** a set postpaid

from:  
Hayden Book Company, Inc.  
116 West Fourteenth Street  
New York, N.Y. 10011

or **WHOLE EARTH CATALOG**

**\$6.60** from Blackwell's (see p. 2)



## Electronics Page

Graphically illustrated and intelligently sequenced, the **Basic Electricity** (vols. 1-5) and **Basic Electronics** (vols. 1-6) sets from **Rider** are the easiest route from innocence to usefulness in electronics without an unnecessary load of math and physics. Good rudiments.

If you plan to go very far with electronics, you will need heavier math. **Basic Mathematics for Electronics** keeps matters practical.

If you're already somewhat into electronics the **Rider** sets will insult you. A better route into deeper work is the well-regarded **Elements of Radio**.

For work with **Silicon Controlled Rectifiers**, the handiest device for controlling AC power to lights, motors, heaters, etc., get the comprehensive **SCR Manual** from GE.

A simple, non-technical, concrete, lucid, complete user's guide to hi-fi is **High Fidelity Systems**.

(Evaluated by Marv Vickers, Fred Richardson, Les Rosen)



**Basic Electronics**  
Van Valkenburgh, Nooger & Neville, Inc.  
1953; 680 pp, 6 vols.

**\$15.25** a set postpaid

from:  
Hayden Book Company, Inc.  
116 West Fourteenth Street  
New York, N.Y. 10011

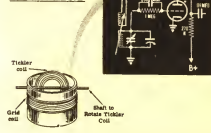
or **WHOLE EARTH CATALOG**

**\$7.92** from Blackwell's (see p. 2)



There are many ways of measuring the amount of feedback. One method which has been used involves varying the physical position of the feedback network by turning the wiper contact away from the grid coil, or, conversely, to the other end of the feedback coil. In this case, the feedback will be reduced. When the wiper is used to control feedback, a potentiometer is not mounted across the feedback coil.

MEASUREMENT TO TUNE COUPLING BETWEEN TUNING AND GRID COILS



You learned that a good way for you to picture the operation of a grid in a vacuum tube was to think of the grid as a valve in a water pipe. The British are so fond of this explanation that, to this day, they call a vacuum tube a "valve." When the grid of the tube is very negative, the "valve" is closed and there is little or no flow of electrons from the cathode to the plate. When the grid voltage is changed so that it becomes only slightly negative, the "valve" is nearly wide open and there is a large flow of electrons from the cathode to the plate.

*Basic Electronics*

**Basic Mathematics for Electronics**

Nelson M. Cooke  
1942, 1960; 679 pp.

**\$9.95** postpaid

from:  
McGraw-Hill Book Co.  
Princeton Road  
Hightstown, N.J. 08520  
Manchester Road  
Manchester, Mo. 63062  
8171 Redwood Highway  
Novato, Ca. 94947

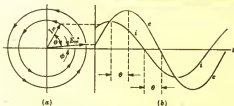
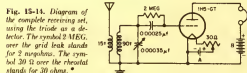


FIG. 32-8 Current  $i$  leads voltage  $e$  by phase angle  $\phi$ .



**Elements of Radio**  
Abraham Marcus and William Marcus  
1965; 672 pp.

**\$8.44** postpaid from:  
Prentice Hall  
Englewood Cliffs, N. J. 07632



Discrete transistors (where electronics was 10 years ago) are very easy to work with. It is far easier to get into construction and design with transistors than it ever was with tubes. No chassis, no heavy components to mount, no high voltage, power supply can be a battery, etc. Very cheap, too. Trying to work with "state of the art" components (wherever that is now) is very expensive, parts are difficult to get and information is often unreliable.

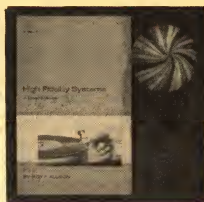
—Fred Richardson



**SCR Manual**  
F. W. Gutzwiller, ed.  
1967; 513 pp.

**\$3.00** postpaid

from:  
General Electric Company  
Dept. B  
3800 North Milwaukee Avenue  
Chicago, Illinois 60641

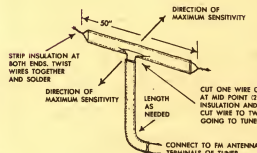


**High Fidelity Systems**  
Roy F. Allison  
1962, 1965; 91 pp.

**\$1.25** postpaid

from:  
Dover Publications, Inc.  
180 Varick Street  
New York, N.Y. 10014

or **WHOLE EARTH CATALOG**



How to make a simple FM antenna which is very effective in favorable receiving locations.

Still simpler, and satisfactory in favorable reception areas, is the twin-lead antenna shown in the diagram. This can be stapled inside a closet, on the back of a cabinet holding high-fidelity equipment, along a baseboard moulding, or in any convenient location so long as it isn't very close to large bodies of metal.

One final note on hum: don't overlook the possibility that it may be mechanical noise. The power transformer of an amplifier can buzz at a hum frequency if the mounting bolts or the windings aren't tight. Cures include tightening the mounting bolts and shock-mounting the amplifier on a soft pad. Leave holes for ventilation, of course.

Acoustic feedback usually can be cured for at least reduced to insignificant by improving the shock mounts under the turntable. Putting the speakers on thick pads of foam rubber may help also, particularly if they rest on the floor. In some severe cases you may have no alternative to increasing the distance between the turntable and speakers.

*High Fidelity Systems*



D.R. saw that he was dying as soon as they went outside. They shouldn't have even tried it but the pulse was quickening now. Emmet wanted to go. He wanted to show D.R. how little there was left of what there used to be, and how many new things he had started.

Ten

Ten feet from the porch steps Emmet shook his head and said he couldn't go any further. His breath was failing. Half falling he turned and went back and sat down on the bottom step and then leaned back against the steps above, fighting for his breath.



## ABC's of Short Wave Listening

I started listening to short wave when I was twelve on an old (1937) Crosley shortwave console radio I bought from Honest Ben's for \$5. I replaced a few tubes and then learned to count seconds listening to WWV.

You can receive much more than the WWV time signal. *Voice of America*, *Radio Swan*, etc. (See p. 127, *Popular Science*). It is fun and can be very informative.

This book is a very basic introduction to short wave. You can spend a lot of money on a good receiver. Or make do with an old console. Depends on what you want.

(Reviewed by Fred Richardson)

## ABC's of Short-Wave Listening

Len Buckwater  
1962, 96 pp.

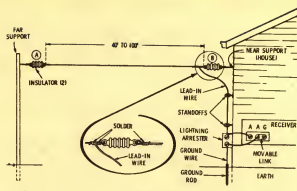
\$2.95 postpaid

from:

Howard W. Sams & Co., Inc.  
4300 W. 62nd St.  
Box 558  
Indianapolis, Indiana 46206

or WHOLE EARTH CATALOG

As the major piece of equipment in the hobby of short-wave listening, the receiver must convert the minute energy of a radio wave into an audible signal. How well a receiver can do this is mostly a measure of its sensitivity and selectivity. The first quality, sensitivity, is the ability to separate a signal from the ever-present noise level created by disturbances in the atmosphere and outer space.



(A) Inverted antenna.

Table 2-1. The Radio Spectrum

Major Divisions	Frequency Ranges
VLF = Very Low Frequency	10 kHz to 30 kHz
LF = Low Frequency	30 kHz to 300 kHz
MF = Medium Frequency	300 kHz to 3000 kHz
HF = High Frequency	3 MHz to 30 MHz
VHF = Very High Frequency	30 MHz to 300 MHz
UHF = Ultrahigh Frequency	300 MHz to 3000 MHz
SHF = Superhigh Frequency	3 GHz to 30 GHz
EHF = Extremely High Frequency	30 GHz to 300 GHz

\* Most SW listening is done in this part of the spectrum.

Selectivity describes how well the receiver can pick out a signal in a crowded frequency band. It is mainly by these two qualities that a short-wave receiver may be judged. A multitude of features may appear in a given set, but these are usually concerned with operating convenience rather than operating quality.

## The Radio Amateur's Handbook

### 10 The Radio Amateur's Handbook

10a This has been the practical guide for radio amateurs for 43 years. It begins with the fundamentals of electric circuits and follows a simple development of the radio theory necessary to understand communications. There is brief section on laws governing antennas and references to other books that are valuable aids in obtaining a license.

10b Throughout the book actual circuits are shown, always with enough information to build them. Later sections cover complete construction details for various transmitters and receivers but don't be misled by their apparent simplicity. It takes a lot of time and know-how to make these things work and unless circuit building is your thing you are better off to buy commercial equipment or kits. (Heathkit is one of the best sources for ham gear.)



The review to the left was prepared and printed on a computer by Bill English—as you can see, the fluidity of computer interaction make spelling more casual than with direct hard print.

The *Radio Amateur's Handbook* may be of interest to the communities and enclaves who've been fantasizing an underground radio net. Like a night of the week or month when all the world's long-hairs are on the air, vibing to each other and the stars. —SB

(Reviewed by Bill English;  
Suggested by Arthur Brand)

### The Radio Amateur's Handbook

American Radio Relay League  
1925... 1971; 658 pp.

\$4.50 postpaid

\$6.00 Canada, \$6.00 elsewhere

from:  
The American Radio Relay League  
Newington, Conn. 06111

## Radio

In the March \$1 *Catalog* you were wondering about how to fit electronics into your catalog better. It seems to me that electronics equipment is relevant to the very important hobby of short-wave listening, with one another. Radios, transceivers, hydrophones, ultrasonic transducers, and tape recorders certainly are significant tools. However, one of the most important communication tools, (in my opinion) is a shortwave receiver. Listening is the beginning of all communication, even the humblest short-wave receivers. Americans have neglected shortwave radio but the rest of the world (mainly other governments) is broadcasting it's opinions, views, points, philosophies, music, literature and drama for anyone to examine. It is free to anyone with a shortwave radio.

The simplest way to start listening is to turn on any shortwave-ready radio you have. Reception is better if you attach a long antenna and a good ground. Reception is also better after dark. You may have a good shortwave receiver in your attic or a \$5 to \$25 Salvation Army Store radio will serve. Almost anything made after 1932 is liable to work well. Of course if you have more money a store-bought receiver or kit would be fine too. I hope some of your correspondents will be reviewing receivers and listening guides.

Besides ham radio it seems to me that souls interested in underground and aboveground radio and to ought to check the radio & tape trade journals for the names of brokers in used broadcast equipment. With the introduction of color tv, multiplex film and transistors a lot of good equipment has been obsolete. Presently much of this stuff is sold to less affluent parties overseas. Also since many police and fire departments have changed from broadcasting on vhf and uhf bands I'd bet that there is some modest power gear on the market worth a look for shortwave broadcasting with merely a new crystal (like \$10 and a tune).

Lee McUsick  
Chimayo, N.M.

## Get Your Ham Ticket

Okay, my push for all the whole earth types to get their tickets!

- When this country falls apart, all that portable equipment and practical electronics knowledge and all those established nets are going to be the tools to stay alive and coordinate with your friends.
- Intelligent roundabout discussion is not only possible but enjoyable, mainly because if someone is an obnoxious bastard you can tell him to politely go or off on some other frequency and start another roundabout.
- Organized amateur radio gets information spread fast. It doesn't matter what the information is or how far it has to go, witness Alaska hams during the big earthquake a few years ago and the more recent and controversial National Student Information Net.
- Ever see a ham to roundabout?

Why don't more hams and street people become hams? I think that does not see amateur radio as the noble tool that it is. The skills and discipline of radio in the telephone age are somewhat like the skills and discipline of the photographer who takes a black and white in the futuristic age. The price is generally its knowledge and time.

The whopper in this whole discussion, though, is the relatively unknown but potentially enormously beneficial use of amateur repeaters. See the April 1971 issue of 22, which lists six in the Bay area alone. With repeaters, ten watts of vhf and a good antenna pointed at the repeater itself will get your signal out over the entire Bay. Los Angeles area, Chicago area, the entire state of New Mexico, most of Mass. N.H., and even in most of the stable circle to license in most parts of the country, but require a lot of groundwork and a good high antenna. I don't know a couple thousand dollars unless you are the stronger supreme.

Last summer I listened to the prime Chicago repeater for a couple days and heard fixed stations over the Wisconsin border and over more than thirty miles to the south chatting with a mobile unit watching the planes take off at O'Hare and a woman walking near the loop with a walkie-talkie. I understand that one can now drive through the northeast and scarcely ever be out of range of at least one machine. Mind you that all this is taking place more or less line-of-sight on high antenna. I don't know if this is a broadcast outlet or to channel 7.

I'll GSO any of you after my part of the war is over.

Wes Plowf / WABCB  
Elkhart AFB, Alaska

## Electronics

For technical freaks. If you are a double E ENGINEER, the articles may be of interest. Otherwise, spend your time with the ads. Learn about all the new hardware and bits and pieces. A reader service card whereby all of the advertisers will send you piles of shit on their products. By far the best part is the Electronics Buyers Guide, a three-inch thick directory that comes once a year and lists all manufacturers (and their sales reps) that have anything to do with electronics.

Don't forget your title and company name. Get a subscription blank from one at the library and have no trouble.

(Reviewed by Fred Richardson)

## Electronics

\$8.00 a year, biweekly

from:  
Electronics  
P.O. Box 514  
Highstown, N.J. 08520  
Subscription department



Subscriptions limited to persons with active, professional, functional responsibility in electronics technology. Publisher reserves the right to reject non-qualified requests. Non-qualified title or job function, company or organization, including product manufactured or services performed. Subscription rates: qualified subscribers in the United States and possessions and Canada, \$8.00 one year, \$12.00 two years, \$16.00 three years; all other countries \$25.00 two years. Limited quota of subscriptions available at higher-than-basic rate for persons outside of field served, as follows: U.S. and possessions and Canada, \$25.00 one year; all other countries \$50.00. Air freight service to Japan, \$60.00 one year, including prepaid postage. Single copies: United States and possessions in Canada, \$1.00; all other countries, \$1.75.

## Sex and Broadcasting: A Handbook on Starting Community Stations

Lorenzo W. Milam  
1971; 40 pp.

\$1.00 postpaid

from:  
Dilid Press—KT40  
5 University Avenue  
Los Gatos, California 95030

or WHOLE EARTH CATALOG

I could spend pages, hours, days, telling you about how to fill out Form 340 (from the FCC). But since you and I are always involved in learning processes, let us look on this as such an experience. Fill it out to the best of your ability, show it to your lawyer—assuming you have one—or send a rough draft to me. I will help you out as much as I can if I am convinced that you truly want to set up a community oriented free form free for your listener volunteer station. If not: I can't help that. For I love broadcasting and radio too much to give free time and assistance to someone who will be a broadcast outlet as a stamping ground for some mistaken single-cell personality.

## Heathkit

Between readymade and total do-it-yourself is Heathkit. Assembling yourself saves 25-40%, plus education, minus time. It's good electronic equipment of wide variety: color TV (14", \$300), guitar amplifier (120 watt, \$193), excellent AR-15 stereo tuner (\$207), 5" Oscilloscope (\$200), sundry lab equipment, CB 5-watt transceiver (\$100), portable short-wave receiver (\$142), Theater organ (\$1200), microwave oven (\$440).

### Heathkit Catalog

1971: 115 pp.

free

from: Schlumberger Products Corporation  
P.O. Box 167  
St. Joseph, Michigan 49085



Shortwave

## Allied Radio Shack

After considerable mail and discussion by CATALOG users, it seems clear that Allied (now merged with Radio Shack) is the best mail order source for electronic gear. They also print an industrial electronic catalog that is particularly rich in components, (especially noteworthy: integrated circuit components). Plug in, link up, disassemble.

### Allied Radio Shack Catalog

\$1.00

### Allied Industrial Electronics Catalog

\$2.00 (No charge with order  
Refunded first purchase.)

from: Allied Radio Shack  
100 N. Western Avenue  
Chicago, Ill. 60680



ELECTRO-VOICE

21-112 ONE-WATT ONE-CHANNEL WALKIE-TALKIE  
Long range power at a rock bottom low price. The "Rover" has an all solid-state circuit, with extra-sensitive RF amplifier stage to really pull in signals. Volume control and push-to-talk switch. Slim design with rugged die-cast front. Perfect for portables, technicians, farmers or anyone who needs long range capability. Has 59' channel clearing antenna. Complete with 8-AA penlight cells, plug in Channel 11 crystals and instructions, and \$4.95 value carrying case. Ship. Wt. 1.1 lb. . . . . \$2.95

16-WATT PORTABLE MEGAPHONE  
ELECTRO-VOICE PMA54E. Battery-powered portable megaphone provides 16-watt peak power (10-watt continuous) output to cover a range of 650 yards. Has external noise-canceling mike with on-off switch, volume control, coiled cord. Built in alarm horn. Bell diameter, 11 1/2". With shoulder strap. Operates on 8 ordinary flashlight "C" batteries. . . . . \$7.95



Ten octaves of sound!

150%

### Electrostatic Headphones give widest response

Model ESP-4. World's only self-energized electrostatic headphones. Give depth and breadth of sound for stereo at its best. You get the perfection of the original studio recording with no room acoustics problems. Electrostatic driver elements provide unbelievable response far beyond the limits of ordinary voice coils and cone-type driver elements. From 15-15,000 Hz, response is an amazing flat  $\pm 2$  dB (full 10 octaves). Total response is a remarkable 10-40,000 Hz.

Special push-pull acoustical circuitry virtually ends distortion to give the clean sparkling sound of a live performance. Harmonic distortion is less than 0.2% at 110 dB SPL. No special amplifier or power supply needed. Separate energizer offers option of self-energizing for bias supply, or energizing through AC line. When energized through AC line, precise level measurements can be made. In tape mastering machines and recording consoles for example. Energizer has speaker/headphone switch, on-off switch and AC pilot light.

Fluid-filled cushions and lightweight design (only 19 ounces) let you listen in comfort for hours. Full 12-watt power capacity, impedance, 4-16 ohms. With 2' conductor input cable that connects to amplifier output terminals. Energizer size, 4 1/2 x 3 1/2 x 3/4". . . . . \$59.00

## 11 Tektronix

11a Tektronix has become the electronics industry standard for oscilloscopes. They are consistently ahead of the competition and their attention to "user" features in functions and control design make the instruments a joy to use. This catalog includes the complete line of scopes and of their other test equipment, particularly pulse generators and amplifiers, all solidly designed.

11b The equipment is expensive - \$735 for the cheapest scope - but well worth its price.

[Reviewed by Bill English.  
Suggested by Mike Brand]

Tektronix Catalog  
1971: 432 pp.

from: Tektronix, Inc.  
P.O. Box 500  
Beaverton, Ore. 97005

(see p. 346)

TYPE 321A OSCILLOSCOPE, without batteries . . . \$1045



Stout heart of the finest stereo systems:  
Heathkit AR-15 Stereo Receiver 369.95  
\$75.00 wired

## Famous Low-Cost "Benton Harbor Lunch Boxes" Compact 6 & 2 Meter Transceivers



• Perfect for the ham-on-the-go • Ideal for CAP, MARS, local net, or emergency operations • 5-watt input crystal-controlled A.M. transmitter • HW-30 2-meter model capable of operation on new USQCA Auxiliary frequency 143.28 MHz

GO VHF FOR LESS . . . complete transceivers, lunch-box size. Feature crystal controlled transmitter with straight-through final amplifier. Crystals (not supplied) are in the 8 MHz range. Receiver is super-regenerative with RF stage . . . features 1 uv sensitivity! The built-in 120 VAC power supply, speaker, press-to-talk switch on front panel, and ceramic mike included make these units ready to go on the air with your antenna. Power cables for mobile and A.C. operation are included.

KIT HW-29A (6 meter), 9 lbs., no money dn, . . . . . \$49.95  
KIT HW-30 (2 meter), 5 lbs., no money dn, . . . . . \$49.95

## Newark Electronics

If you are at all a serious buyer of electronic parts and equipment, industrial catalogs should be much more appealing to you than the standard consumer catalogs. Industrial catalogs dwell mostly on the facts rather than promotions. Each item gets its share of space, and no more. And of course the variety is extremely broader. When building your own projects, it makes a lot more sense to use a large, factual catalog full of components rather than the typical consumer catalog. Newark's catalog fills the bill. Don't let the word "industrial" scare you away. They're prepared to handle the same kind of mail orders as the firms whose catalogs fill their first 200 pages with color photos of hi-fi equipment (one item per page) and use most of the descriptive text for promotional purposes. Newark lets the facts sell you.

[Suggested and reviewed by David Marston]

Newark Electronics Corp.  
600 North Pulaski Road  
Chicago, Illinois 60624

### Edlie's Flyer

Beginners in electronics who don't want to be stuck with very beautiful but very unusable gadgets (and also experts who know what's used-for-what) can get a lot of value from industrial (civilian) surplus electronics, these days.

For the "consumer" uses of electronics—music, p.a., TV, repair parts and instruments, experimenting—Edlie Electronics has the best selection and the lowest prices of any mail-order dealer I have found.

They handle everything from hi-fi components (e.g., an FM tuner from a discontinued console) to single resistors. Some of it is new, and some of it is old "as is" (e.g. small radios and tape recorders returned to the store under a warranty.)

If you don't feel safe about repair work or experiments, though, better concentrate on getting electronic stuff with a dependable guarantee, maybe by buying from a repair shop.

[Suggested and Reviewed by John Huntley]

### Edlie's Flyer Catalog free

from: Edlie Electronics, Inc.  
2700 Hempstead Turnpike  
Levittown, Long Island,  
New York 11756



Right there in front of D.R.'s eyes

Emmit was actually dying.

D.R. started to ask Emmit what he should do but Emmit waved his hand and shook his head. He knew what D.R. was about to say and he didn't want to

hear it

hear what? What old voice, old time

For sure, Emmit didn't want the boy to say anything he would have to answer, for he was barely breathing now, working hard for every little bit of air he got.



Don't know whether the Catalogue is much into the Hi-Fidelity sound business. Hi-Fidelity is an imprecise term. It is a spectrum. But the smallest and least expensive speaker that seems to me to be entitled to call itself hi-fidelity is the new Dynaco. It is really quite extraordinary. I made A-B tests of it against a KLH-6, a very fine speaker, and though in some respects the 6 was better, deeper bass, somewhat more fullness—in other respects, I felt the Dynaco was quite definitely superior. In really dense textured material, large orchestral and choral passages, the sound is somewhat better defined. Anyway, it is a fine piece of work—list price \$80, discounts for less than that at some places in the area.

Some of the best European tape recorders can be bought much more cheaply from a London firm called C. C. Goodwin, Ltd., 7, The Broadway, Wood Green, London N22, England. The new Tandberg 1600X tape deck which sells here for \$250, they sell for \$172. To that you would have to add cost of shipping and some duty, but the total would not be as high as \$200, which is a useful saving.

Feeling rich these days. Bought a couple of Rectilinear X speakers. Tastes differ in these matters, but I haven't heard anything I like better at any price.

A portable tape recorder is a very good gadget for school. CONSUMER REPORTS recently recommended one from Sears. I bought one and have tried it out and it seems to work very well. Good sound quality.

An English audio outfit called Sinclair makes a little stereo amplifier called the Neoterix 60 Mark II. An outfit called Audio T, 16 RR, Dryden Chambers, 119 Oxford St., London W1, England, sells it for 46 pounds, with shipping and duty it all comes to about \$125.00. I took it to one of our best local hi-fi places, and they were ecstatic about it. Not only is there nothing of comparable power and quality at that price in this country, but the little gadget is so tiny you can hardly believe it. A really elegant piece of gear. The manufacturers say it has 20 watts per channel, but this is extremely conservative.

Best,  
John Holt  
Boston, Mass.

## Hi-Fi Tips

Read John Holt's hi-fi letter, and concur with his rave review of the Dynaco speaker. After about 13 years as a hi-fi buff, the last 8 of them writing about the field professionally, Dyna is one of those companies whose new products I tend to trust before I see them, but in the speaker, they've surpassed themselves.

Dyna also has discovered that a good tip towards the effect of a four-channel system can be achieved with existing stereo recordings and broadcasts, using only one extra speaker. Connect it across the hot leads of both stereo channels, and any instrument that was recorded out of phase in the two normal channels comes out loud and clear from this 3rd speaker (which should be in the back of the room). Other than that, stay clear of four-channel for at least 6 months, until the smoke clears. There will be lots of pseudo-quad gadgetry and some good stuff coming out in a batch between now and Fall.

The Rectilinear X John Holt mentions has been replaced by the Xa, which Rectilinear (friends of mine) say is better, as does the guy who writes their ads, and uses them at home. There seems to be some opinion that the X (and Xa) beat the more expensive Rectilinear II; I haven't directly compared them, so can't confirm, but all 3 Rectilinear sound fine to me, and I prefer the RIII to the AR-3a for most (not all) material—especially prefer RIII for piano, but AR-3a for most pop.

If I were recommending a cheap component system right now, my choice would be:

Quad 1212 changer or AR turntable.  
Dual FT8 (810) cartridge—Shure M91E, if you want to spend lots more. (Also, listen to the Pickering—I don't know how well they sound from personal experience, but the dust-brush feature is nice for people who don't clean records much.)

Sony ST-5600 tuner

Sony TA-1100 amp (may be prejudiced—had them in the house while I wrote ads about them for Sony—but they seemed very good for the money: \$120 each)

Dynaco A25 speakers.

Watch for Dolby-ized tape and cassette equipment later this year—it lets you get good quality on recordings you make at slower speeds (saving tape). KLH \$225 tape recorder has it now, others to follow, especially in cassette. Doesn't do anything for pre-recorded tapes, though.

Roy Allison's hi-fi book from Dover publications (sugg. by Fred) is best practical guide I know. Ed Vitclur's companion volume (also Dover p.b.) is best, most lucid, most accurate guide to hi-fi theory.

Ivan Berger  
New York, N.Y.

P.S.: Other companies I take on faith: AR, Shure, KLH (at least, until many of their top brains went out and started Advent—now I wait and see on both companies).

P.P.S.: AR speakers sound very bassy when sitting on the floor. If you don't like that, they make a good, cheap speaker stand—or raise your speaker on a crate (good for other speakers, too, with the same problem).



## Glyph

A big tough speaker, like a diesel truck, and tone as nice as you please. Built waterproof. Easy to ship. The first loud sound I've heard that didn't make me want to run. I wanted to stay and shake.

—SB

MN50 w/M Driver \$800.00

Glyph Sound Systems  
Berkeley, CA  
(415) 524-3556

## How to Build Speaker Enclosures

In order to get the best response from a speaker, the enclosure needs to be carefully designed and engineered to match the speaker being used.

If you have some knowledge and skill in cabinet construction, you should be able to use this book to build excellent speaker enclosures. It doesn't tell you how to put them together, but it does tell you how to calculate size, design baffles, and properly brace the cabinet to keep it from vibrating.

Not for the novice carpenter.

[Reviewed by Fred Richardson.  
Suggested by Michael Wells]

How to Build Speaker Enclosures  
Alexis Badmaeff and Don Davis  
1966; 144 pp.

\$3.50 postpaid

from:  
The Bobbs-Merrill Company, Inc.  
4300 West 62nd Street  
Indianapolis, Indiana 46206

or WHOLE EARTH CATALOG



## Tandberg

Special price on Tandberg tape recorders. I bought my model 64 for \$205 when Allied, Lafayette, etc., were quoting \$495. If you buy three or more model 64's at one time, you get a \$10 discount on each. But there will be freight and duty costs. Write for information to: L. A. S. Bekkestun Pro., Oslo, Norway. In spite of authorized U.S. dealerships, I believe they will ship to the U.S. anyway. They also have good price on AKG headsets. Thorens turntables, Leak amplifiers, BASF tape, and goodness knows what else.

Pete Shermehorn  
Anda  
Netherlands Antilles

## Preener

The best record cleaner is the Watts Preener.

—SB  
[Suggested by Roger Knights  
and Jerry Minkoff]

## \$4

from:  
Elise Marketing Industries, Inc.  
New Hyde Park, N.Y. 11040



## Audio Cyclopeda

The comprehensive all-purpose reference on audio everything.

—SB



## Audio Cyclopeda

Howard M. Tremain  
1969, 1969; 1757 pp.

\$29.95 postpaid (\$35.95 pnd in Canada)

from:  
The Bobbs-Merrill Co., Inc.  
4300 West 62nd Street  
Indianapolis, Indiana 46206

## Dynaco Kits

Dynaco Inc. of 3060 Jefferson Street, Philadelphia, Pennsylvania 19121 manufactures a line of high quality and excellent value stereo equipment. Their equipment represents some of the best dollar value in the stereo field. They do not charge model's very often (almost never) which means that parts are always available and that their equipment has good resale value. They don't even charge prices with inflation as does everyone else. Added bonus! All the Dynaco line of components is available as kits at substantial savings.

Dynaco kits are easy to assemble and all the critical work is done by Dynaco. Their kits could more accurately be described as semi-kits as all the printed circuit boards are done by Dynaco and you just mount them and wire them in place. Dynaco has some of the easiest, plainest, clearest, most complete construction manuals to make sure that there is no problem in assembling their kits. Dynaco doesn't sell and leave you on your own out in the cold, they also provide technical assistance and service for their equipment.

Roxa Bernheim  
Honolulu, Hawaii

## Stereo Discounts

Did you recently pay full list price for stereo components or recording tape? If so, you got burned. Next time, a discount house can put a comfortable distance between you and the heat. Many discount houses advertise in Stereo Review and High Fidelity, but I've narrowed the list to 6 that give the lowest prices—which doesn't mean, of course, that some more equally good ones may not spring up. These discount houses, by the way, are NOT clubs and don't charge membership fees, although there are some clubs dealing in stereo gear. To my knowledge, these clubs don't match the discounts of the discount houses. The 6 discount houses mentioned above are:

**Downtown Audio**  
17 Warren Street  
New York, NY 10007

**Disc Hi-Fidelity Wholesalers**  
10530 Denmark Avenue  
Kensington, MD 20795

**Hi-Fidelity Center**  
235 East 149 Street  
Brooklyn, NY 10051

**Boston Audio Co.**  
1 Discount Drive  
Randolph, MA 02368

**Rabson 57 Street Inc.**  
129 West 57th Street  
New York, NY 10019

**Carlton Studios**  
R.D. 3, Route 7  
Brookfield, CT 06804

I've personally had satisfactory dealings with the first three. I haven't ordered from the others, but they offer equally low prices. Here as with any purchase, it pays to check each house's price on a given component. Some of available discounts follow:

Component	List Price	Discount Price
Dynaco SCA-80 amplifier, wired	\$249.95	\$165.00
Shure M44E cartridge	34.95	10.50
Superex ST-Pro-8 headphones	49.95	32.00
Garard 40B changer with base, dust cover, less stock	55.50	33.48
Harman-Kardon HK-50 speaker system	95.00	55.00
Watts Dust Bug	6.50	4.95

Certain brands of equipment are fair traded and theoretically can't be sold below list price, but you can sometimes get around this by ordering a fair-traded component and a non-fair-traded component together. Discounts are even better on complete systems than on individual components.

In the market for a low-cost stereo cartridge tracking at 2 to 3 1/2 grams, such as the Shure M44E, ADC 220K, Pickering P142, or Empire 909/XI? Forget them—you want the Grado FTR at just \$24.95, not \$19.95, but \$29.95 from Grado Laboratories, 4614 9th Avenue, Brooklyn, NY 11220. Or a discount house may have it for \$25 to \$7. In Stereo Review July 1969 survey of cartridges the FTR ranked a close third in sound quality behind the ADC 25 (\$100) and the Elac STS-444-12 (\$69.50), and ahead of cartridges costing up to \$65.50 (to keep things in perspective, some of the more expensive cartridges tracked at lower forces than the FTR). Not having a pile of test equipment, I can only add that I've been using an FTR for a year and that it does what it's supposed to.

Other Grado cartridges are the FTE (\$19.95 with elliptical stylus), FCR (\$25), and FCB (\$35 with elliptical stylus). According to Grado, the FC series cartridges are assembled more carefully than those of the FTE series. However, I don't know of any test reports on them.

R. Andrews Buc  
Clayton, Mo.

## More Stereo Discount

One other house that offers significantly discounts on the material they carry (they don't seem to have as big a stock as others) is

**Audio Sales**  
2745 Erie Blvd. East  
Syracuse, N.Y. 13224

I bought my own equipment from them \$650 list. Cost me a little less than \$400 including shipping.

One other note for those who purchase tape

**The Archer As. Store**  
5103 Archer Ave.  
Chicago, IL 60632

has the lowest prices for Sony tapes that we've been able to find in the country. E.g., 1800 7" Polyester PR-150-18 cost \$2.70 a reel. In Philadelphia, this costs 3.69 + 9% sales tax. They'll pay all postage on orders of \$30. (That's just a tape—Get a group together, and on orders over 48 tapes (or after another 5% discount, if the tapes are in groups of 4 doz., can be mixed as long as there's a doz. of each type. For a full list of prices just write them.

John F. Rakic  
Philadelphia, Pa.

## Stereo Warehouse

Young discount crew. I'd get one of their component systems. Postpaid service to West Coast.

—SB

**Stereo Warehouse**  
151 Casa St.  
San Luis Obispo, CA 93401



## "OUR CHOICE" (System #1)

\$229.95

The best medium priced system we have been able to offer

**Nikko STA 301 am/fm receiver.** Solid 40 watts of power into 8 ohms, with audio linear integrated circuits, FET front end, direct tape monitoring, contour control switch, 3 circuit breaker protection, tuning meters, and more.

**Nikko Nikko STA 301 am/fm receiver.** Solid 40 watts of power into 8 ohms, with audio linear integrated circuits, FET front end, direct tape monitoring, contour control switch, 3 circuit breaker protection, tuning meters, and more.

**Garard 40B.** Most popular model in the Garard line. Using the famous 4-pole induction motor, and large balanced platter. Speed, automatic record changer with viscous cueing, and low mass calibrated tracking tone arm—for fine cartridges. Comes with solid walnut base.

**Grado Magnetic Cartridge** \$35.50 (base + cart.) \$118.00 (pair)

**Jordan 830 Speakers.** Excellent 8 in. two-way speaker system. Smooth-extended fidelity, with good bass response. System is efficient, yet will handle considerable power. 8 in. woofer and 3 in. high frequency driver in beautiful oiled walnut cabinet. Approximate size is 18 in. x 10 in. x 9 in. deep.

Total regular price of this stereo system is \$358.95

With the Stereo Warehouse we offer very good name brand components at super low prices. We have tried to eliminate all the disadvantages of buying through correspondence as all shipping and insurance charges are prepaid and we break our asset to ship within two days of the order. All products are factory sealed and carry the full warranty, we even supply all the necessary wire to make setting up the equipment simple and quick.

Most important of all WE CARE.

Peace  
Tom Spalding  
Stereo Warehouse

## db

For those interested in audio in either a professional or semi-professional way the best source of information on the state of the art is a magazine called "db—the Sound Engineering Magazine." This is not to be confused with the so-called "consumer" hi-fi books. It is strictly devoted to the recording engineer, broadcast engineer, audio-visual, theatre sound, commercial sound type of person. It contains a wealth of design, operational and trade info that just cannot be found elsewhere. If you want to know how to install a sound system in an airport, or how to operate a recording console, or are worried about sound levels affecting rock musicians hearing, or any number of purely audio oriented subjects, then db is for you.

I have spoken to the editor of db who informs me that subs are \$6.00/yr in the US and \$7/yr elsewhere. Sample copies are available upon request.

Hope you can use this material. Thanks very much.

(Suggested and reviewed by Fred Hahn)

db  
980 Old Country Rd.  
Plainville, N.Y. 11803

## King Karol Records

This looks like the best mail order source of records. They send you a comprehensive Schwann catalog to order from. Fairish discounts, postage paid. They also carry pre-recorded and blank tapes, cartridges, and cassettes. Now the question is how quick and reliable are they?

—SB

[Suggested by Lloyd Martin]

## Catalog

### free

from:  
**King Karol Records**  
P. O. Box 629  
Times Square Station  
New York, N. Y. 10036



ALL ORDERS IN THE U.S.A. A.P.O. AND F.P.O. ORDERS FREE OF MAILING. AND HANDLING CHARGES (44% OFF for all other foreign handling and mailing—minimum price \$5)

SCHWANN CATALOG MAILED FOR REQUEST

Schwann Catalog List Prices	Your Discount Price	Schwann Catalog List Prices	Your Discount Price
\$1.98	\$1.15	\$2.98	\$2.75
2.50	1.85	4.98	3.75
7.98	7.25	9.98	4.15
		14.98	4.65

PLEASE NOTE: N. Y. RESIDENTS ADD TO THE ABOVE PRICES THE NEW YORK CITY OR STATE SALES TAX



D.R. lay his uncle down and helped him stretch out on his back. He started to take his shoes off for him but Emmitt pulled his feet away. He didn't want to be fooled with.

Leave me alone.

I'll be okay, just let me catch my breath, he said. He reached for the sheet and quilt and pulled them over his shoulders and closed his eyes and sank into the pillow, and D.R. took off running.

Running, down the path below the house, through some broken trees. Downhill he ran this time, past blasted rock and broken trees and piles of rusted trash along the ruined road side.

Pest what was left of people living there and

mining

old hulks of cars and shells of houses,

past the fallen tipple he had hidden under

past the door of one old house whose mouth said what's the hurry,

Down Trace Fork all the way across the bridge

and thara he was again, pounding on the store door. And who should answer

Who should answer but Mrs. Godsey, her Bible in her hand, all smiling, glad to see him, then frightened by his story.

And Leonard came a running.

He wheezed and strained and bit for air and tried to ass himself up the steps, the second,

third

Moving and breathing a little now, some air was coming in.

D.R. put his arm around his uncle's waist and pulled Emmitt's arm around his neck and half-carried him up the steps across the porch and to the bedroom. That one, Emmitt said.

That one, over there. The bed D.R. just got out of. They were changing places, passing one another, going opposite ways, and the pulse of things was clicking right along.







## Tape Recorders



The top of the heap in sound recording is Nagra.  
Their prices start at \$1123.

For general purpose high-quality mobile recording, the Uher 4000 L is still in front of everyone else for reliability and economy (approx \$440.). The new Uher 1000 Report Pilot, designed for sound/film synchronization, costs about \$635.

For Uher:

Hervic Corporation  
14225 Venture Boulevard  
Sherman Oaks, California 91403



## Music by Computers

Music by Computers. Goddamn right. When can we get our hands on them without having to tiptoe around some 18th century Department Chairman? This book and four records edited by the worthy Von Foerster and others assembles James W. Beauchamp, Herbert Brun, M. David Freedman, Lejaren Hiller, M. V. Mathews, J. R. Pierce, J. K. Randall, Arthur Roberts, L. Rosler and Gerald Strang. What I want to know is, can Frank Zappa use it?

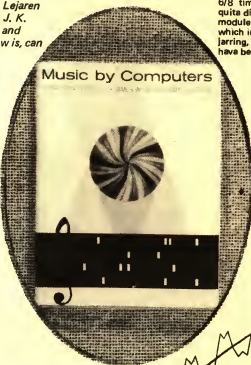
—SB

Bologically speaking, all auditory systems serve primarily one end only one purpose: to infer from the sounds that are perceived the sources that produced these sounds.

In this example 'The British Grenadiers' is gradually converted to 'When Johnny Comes Marching Home' and back, a nauseating musical experience but one not without interest, particularly in the rhythmic conversions. 'The Grenadiers' is written in 2/4 time in the key of F major. 'Johnny' is written in 6/8 time in the key of E minor. The change from 2/4 to 6/8 time can be clearly appreciated, yet would be quite difficult for a human musician to play. The modulation from the key of F major to E minor, which involves a change of two notes in the scale, is jarring, and a smaller transition would undoubtedly have been a better choice.

Only the opinions of listeners can evaluate these factors. Limited opinion sampling, with both experienced and inexperienced listeners, indicates that professional performers prefer a higher level of regularity and accuracy than nonperformers. Neither type appears to approve of the maximum level of computer 'perfection.' Listeners object to the 'electronic organ sound' or the 'machine sound' and ask for more warmth or spontaneity.

Even if extensive opinion sampling were carried out, we would know only what listeners think now, based on conventional literature in conventional performance. There is no reason to believe that such judgments will remain unchanged after listeners have been exposed to much more synthetic sound. Perhaps they prefer 'imperfection' primarily because they have never heard anything else.



## Music by Computers

Heinz von Foerster and  
James W. Beauchamp, ed.  
1969, 129 pp., 4 records  
\$14.95 postpaid

from  
John Wiley & Sons, Inc.  
One Wiley Drive  
Sommerville, N. J. 08873

West:  
1530 South Redwood Road  
Salt Lake City, Utah 84104

or  
WHOLE EARTH CATALOG

## FRAP

"Flat response audio pickup." Hmmm... well, theoretically flat. It's response hasn't actually been measured on an instrument, but it would sound to be better than any other pickup.

The FRAP picks up the sound of the instrument, not the sound of the strings or any other part. Can be put on almost any acoustic instrument (flutes, guitars, etc.) and produces an output similar to that achieved in a studio using separate microphones.

I wish companies wouldn't use terms like "flat response" without defining what they mean by flat. Can be highly misleading at best.

Shipping delay seems to be a month or a little more.

Transducer, preamp, adhesive wax, \$150.

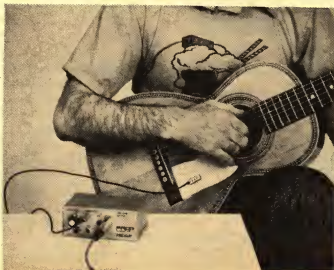
[Reviewed by Fred Richardson]

Information or FRAP from:

FRAP  
43 Dore St.  
San Francisco, CA. 94103

## Cousino Continuous Play Tape

Cousino Electronics Corp., 1941 Franklin Ave., Toledo, Ohio.  
Ph. 246-3691 Makers of Audio-Vendor, offering continuous playback from recorded tape. Single spool of tape unloads and rewinds onto itself. Available in time playing from 3 min to 30 min. at 3-1/4 inches/sec. Used for sleep-learning and therapy, broadcasting, teaching, and sales. from \$5.15 to \$19.95. Free info.



And fifteen minutes later D.R. and Leonard were running up the Trace Fork road, leading an old grey horse that pulled a wooden sled on runners through the breaks and holes and my how fast it all was moving once it started.

Breathless they stopped at the foot of the little slope in front of Emmitt's house that in the old days was a grassy yard that D.R. played on. Even ruined

Even ruined, it was recognizable

but not at all familiar, up

Up the final yards to find Emmitt on the floor, tangled in his quilt and dying, his head pointed toward the kitchen, barely breathing, Leonard

Leonard grabbed the quilt and all the bedding

He grabbed the quilts and blankets off both beds and ran outside to pile them

He piled them on the sled while D.R. lifted

D.R. lifted Emmitt by the shoulders. His eyes were open, seeing, but he didn't look at D.R. He was looking around his bedroom, this old room

in this old house

this bedroom of this ruined house, taking in its details for what his instinct knew would be his final time





need would give a much more honest description of the game than a few promo-photos of the big 5 (approx.). Good speakers (I stubbornly build my own) & amps are, of course necessary if your taste is to sound "as good" on someone else's stereo hi-fi. A friendship with an "editor" pal will prove invaluable. It's essential to the editor's blue pencil. Prior to the synthesizer every note, yes, Virginia, even the 16th & 32nd kind were assembled by the edit board & by a musician/composer who either didn't own a watch or had absolutely no regard for the units it indicated. And, oh yes, it helps to be a bit crazy. No, let's say a lot crazy. To be sitting here in my west side brownstone in upper 80's Manhattan contemplating the multi-thousand dollars of equipment Ray Elkind & I have been organizing into my home studio & then writing all these put-downs to you, in her home town, makes me feel kinda strange (and being *very* broke helps). Perhaps that will help the new album. I wish you were closer by so that you could see just how involved two "arts" with a capital (fingers crossed) A. artists' can become in this medium. And our only hope right now? Pay the bills & get ourselves a nice quiet gothic dome (again, thanks to you & Donebook) I am out to St. Thomas & get out of N.Y.C. except now and again when that unglaguetto for noise/dirt/culture/thinking/books/concerts/activity calls.

Frankly, you all sound like kind of people, or vice-versa if that's more right-oh, well, me you. Many will. A few, I am certain, sweat, brains, adrenalin-push, etc. that get last one out. And, if it's not too late, please help get the confusion out of the E.M. community. It's mostly over and again when that unglaguetto for noise/dirt/culture/thinking/books/concerts/activity calls. I get that I understand. If anything in this garbled mess of a rap is useful, it's yours, no string—no first I've ever let my hermitism to do it—so but do credit it with a simple: W. Carlos. Otherwise, all warm regards from but two more of your fans!

W. Carlos

#### A.P.S. page of specifics

**THE MOOG.** I know this unit the best—first met Bob (R.A. Moog's "RM") at 1963 AES show. Purchased a small collection of his first 900 series modules & combined into my 1st prototype synthesizer. Paid most of the bill by doing a demo record for Bob & doing music & ex. for T.V. commercials. Developed several ideas many now part of standard Moog units which are packaged with (and) no choice of components except on special order. The pit of the Moog III you know is 3-4 yr. old. Never IV is more compact & less black panels. Portamento & hold circuit originally my concept, but Bob improved it greatly. He built my two touch-sensitive keyboards to spec, and together we got them to work. They're the best I've ever seen. I used to use a pressure (depth) and momentum (for touch) to get the desired kind of phrasing, but now I use (speed) touch of the performer to get the traditional kind or other kind (timbral/vibrato expression, for ex.). Unfortunately, his keyboard supplier changed and the new kids don't lend themselves to token sensitivity except in the horrid way the Putney does it (more on that later). I use good controls (ohmitic or AB "pop") and sturdy construction, but relies on patch cords except for a few

basic switch available internal connections (keyboard patch to voltage-control input on an oscillator, for ex.). In the town & polluted N.Y. air the cumbersome patch cords are more reliable than switches, making a money for city use a better choice than the Moog which is nearly all crossbar/matrix switch—interconnected—near but fall apart. Moog's 904 filter best voltage controlled version I have. I have 3. Also his envelope generators are great, but he underestimates their need. His largest Mark III has but 3 great even if slow on custom generators. I've got several foot buttons and two pistons/expression pedals that he built—all good stuff. Logical layouts, too. I also am a nut about all that pretty real walnut for everything, even the custom gages. We also connected a "polyphonic" generator bank, an outgrowth of one of his earlier educational contracts. It's got 48 separate little oscillators—filters—envelopers & permits chords, arpeggios, and the like. It's another oscillator with no voltage control or enveloping or the like, but it's good for pop-style "vamping" of chords, and at least he has it up for sale. I have two keyboards but despite the 6" & 6" mats of my machine I usually use up nearly all the components on one sound leaving the 2nd keyboard without any resources, so I almost always work one-note at a time. It does give the best control—you can concentrate on one part, like a soloist, and let multi-tracking provide the chords, the density, the orchestration, etc. so far, with only an 8-track I've gotten to 22 parts, with a few "pre-mixes." That should be enough for anyone, but I'm still eager to work on 16 tracks, more for convenience than thickness.

**THE TONUS** has much better oscillators than the Moog & gives you 2 notes at a time, with reservations. Otherwise it isn't too different from the Moog. Al Perlman admits being influenced by Bob Moog. I already mentioned the hazards of Tonus' switching—"caveat emptor." Also, his walnut formula is a bit less "classy" than Bob's walnut wood veneers. He has a few new ideas—something better we shape variety, but his filters are not so great, and his envelopers have a more limited range than I could work with, although throughout that range they are good. The *Arp*, then, could be better than Tonus but not yet, and is about the same price. But again, the biggest is about seven grand and by now my unit is worth over double that, and Tonus doesn't grow larger as conveniently as Moog, so again compromises. But, for concert use, it's probably the best choice & operates about as easily as a Moog, and is quickly learnable (basic techniques, not physics, natch).

The "BUCHLA Box" was built mainly to Morton Subotnick's specs & his group originally at San Francisco. It's better suited to that. Mort writes. The *Electric Circus* in town here uses one for ambience, and with all its automated sequencers it's good for that. The construction and looks are good, but his oscillators are a little and breaks under less-than-cautious handling. Prices are reasonable. However, there is no playing-keyboard of the more or less traditional type, and along with oscillators less stable & less easy to tune than Moog's, is not a good device for traditionally oriented melody/harmony/rhythm. Also, unlike Moog's & *Arp*'s sequencers, his are usually evenly spaced leading to, for my ears, a rigid, mechanical rhythmic quality which some people seem to dig.

**THE PUTNEY** is a real toy. It's components are highly unstable/unreliable, and the selection made is highly gimmick oriented, and does not by any stretch of the mind permit any subtle sounds & exp. to be constructed. It also has a so-called touch-sensitive keyboard, which has to be touched to be believed, it's that awful! No feel or physical feedback at all (as there is on a piano, for example); again, another great concept worked out in ignorance (and the one I tried worst backwards: softer touch-louder sounds!) But it is small & portable & groups might like it for special effects.

The same for several other mini-synthesizers. I won't go into details, but it is sufficient to say that they are not aiming at any degree of sophistication or control. I find the lot of them dull & not worth even their modest costs. Better to save up for a Moog or *Arp* of moderate size & build it up with time to as large a complexity (or compundity) as you desire.

Most of these units are not easily compatible with one another, although the hybrid idea can be made to work if one has the necessary knowledge. I'm still waiting for a better state-of-the-art before I part with any more of my gear, however.

On top of this, one must realize that the money buy has just begun, even a used *Arp* or 4-track costs nearly 3 grand, and another 2 track (preferably) is usually necessary, for at least half that. Most home machines fall flat on their captans in this kind of work.

Perhaps the small Dobby-6 could help out the limited budget. There is still a lot of garbage-talk out. The "technical—snow-snow" is sadly typical. But who am I to put down folks who dig the magic/mysticism of what I find down-right quackery? I was sorry to see that new publication jump into that fire. It's like everyone wants to join in this or that "avant garde" movement, complete with secret type jargon & mathematics of the most pitiful sort (my B.A. in physics-mathematics is showing to "prove" that such and such a dull work is "really interesting." I'd like to see most planners of the independent sort, striking out with even makeshift gear to find some personal statement of truth, be it fashionable stylistically or not, but here this seems to be the problem of all music & all the arts in general; electronic music has no monopoly here.

I wish the name "synthesizer" could vanish. Who wants synthetic anything, especially music? The path we are in (I hope) towards a useful, convenient new musical instrument which employs electronic components to do what physical-components have done for years. It ought to be an outgrowth of the past; I see no skyhook to a totally new path. The attempts I've heard seem to prove this rigorously. In the meantime I can only hope not too much damage to the image & progress of E.M. will be brought about by the "nonsense-boy", and that some talented "saviors" will find the means & breed to show the way & expose the bull-shit artists for what they are, sorry to the uninformed. So, there, my sermon is done. Sorry about that. It's just so damned hard to be objective anymore.

W. Carlos

#### Musical Synthesizers

coming into california out of montana snow a couple of years ago the truck radio started picking up a strange, synchopated, alien, version of "crispie creek." sounded like some human metronome playing a banjo with a weasle pet inside a boxcar. turned out to be a moog. seems like the synthesizer people should stay away from old standards like "don't step on mama's roses" and develop some sound that fits the tone.

-jd

#### Electronic Musical Instruments

A not-too-bad introduction to the rudiments of the

—SB

#### Electronic Musical Instruments

Norman Crowhurst

1971-1981

\$4.95 postpaid

from:

TAB books  
Monterey & Pinola Aves.  
Blue Ridge Summit, Pa. 17214

or WHOLE EARTH CATALOG

#### ELECTRONIC MUSICAL INSTRUMENTS

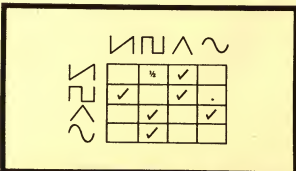


Fig. 4-25. Chart showing the possible direct transformations of the four basic waveforms.



Breathe, Emmitt. Suck you in a big lungful.

Emmitt heaved, he bit

Emmitt heaved and bit and suddenly raised his head and sniffed and got some air, in, out, he breathed and breathed, and by the time they got him on the sled he had voice enough to argue.

I don't want to go to no hospital.

Well you're going to one whether you like it or not. I should have taken you in a month ago.

Who was that?

It was Leonard.

It's me, said Leonard.

Goddamn you for taking me, said Emmitt. And he looked at D.R. and said goddamn you too.

Oh it was moving swiftly now. Oh it was happening fast. Is this how fast it goes? It's clear, so vivid, is this how fast it happens? Emmitt's first hours on earth were passing through his, with some fire, consuming him, filling all his cracks and empty spaces with its rush and flow and go.

There's no much work, so much to suddenly do, it's not about doing, it's not fretting doing. Not talking, nor remembering nor looking forward but DOING. Get him to the hospital, quick.

quick,

off this mountain, into Utopia.

The Putney looks to be a more modest, self-contained unit, with a lower price range (around \$1000). Write to:

Tonic Industries, Incorporated  
128 James Street  
Morristown, New Jersey 07960

Electronic Synthesizers  
Communications

331



## Exotic Delicate Harpsichords

In a sculpator, actually. But I've lately become involved in harpsichords and clavicords. I got to reading about them, and then started building clavicords, and concentrating on them. I might mention that I'm not a luthier, but I'm a sculpator. I've made a few of the quality clavicords have been made in the past. They are, as you probably know, an early keyboard instrument, very simple in principle. When played, they are so quiet as to be drowned out by 2 people talking. They can't be played with another instrument, as they are too quiet, and I seriously doubt that they could be played very satisfactorily in a city, due to traffic noise. But the delicious thing about them is that they are the most sensitive of all keyboard instruments. You can play with a volume range down to nothing, and you can add volume back up by pressing your finger gently up and down on the key. If you are sensitive, you can feel the vibrations of the string in your finger as you hold the key down. Now here's the thing. When you use one on TV, or read in magazine, billboards, etc., etc. it is designed to be seen or read by someone who is not too interested. Commercially must catch the guy just heading into the kitchen, must reach out and grab the listener. I guess one of the big things that turns me on about clavicords is that they make no attempt whatsoever to do this. You must come to them, and you must come on their terms. That is absolute silence. As you play, or listen to one, your level of hearing grows more acute. What sounded like a faint hum when you first heard it, now sounds like a roar. Music, then, if someone coughs, it sounds like dynamite. I like the idea of small sounds being appreciated, and of great sensitivity, which you must seek out, which is not recommended under any circumstances. If you approach a clavicord on its own terms, it has a tremendous amount to give.

Now for something of more use to you. In this whole bag of reining in instruments, there is a reference source called "Three Centuries of Harpsichord Making" by Frank Hubbard, Harvard University Press, 79 Garden St., Cambridge, 02138. It is \$25.00, it is a fantastic book. It details the techniques and processes used to make harpsichords (he doesn't deal with clavicords at all) and it is so thoroughly researched it makes your head spin. He spends quite a bit of time with general processes of the time (1500 to 1800) such as how lumber was cut and sold, what sizes of boards could be bought, how common pins were made (you wouldn't believe it!) the tools used, etc. Another great book is "The Modern Harpsichord" by Wolfgang Zuckermann, October House, 55 W. 13th St., New York, 10011. \$15.00. This deals with instruments being made today. He has good sections on old instruments and practices, then the main body of the book is a section listing modern makers, with addresses, photographs, checked opinions, very good opinions, humorous anecdotes etc.

Makers of modern instruments are all in that book, but you might be interested in some of the more interesting among them, mostly those who make kits.

J. Wilcher, Ancient Instruments, 17715 La Roca Lane, Fountain Valley, California, 92708. This firm is a gas (run by 2 ex-underrun engineers) and they make harpsichords, virginals, clavicords, Gigue, Lini da Brecco, Citterns, Flurdy Guitars, Baroque Flutes, Baroque Oboes, Baroque Oboes d'Amour, Cornetts, mace Cornetts, Racketts, Cello, and the famous Baroque Bassoon. Honest. Their clavicord kits for around \$300 and \$450. They also make a hardy guitar kit #75 and a table model clavicord kit (#950 or \$125). Not guys.

E.O. Witt, Route 3, Three Rivers, Michigan, 49093. He makes a very serious line of harpsichords and clavicords (including fretted clavicords—the only man I've heard of doing that, and in this crowded world you've got to be a little different). He does everything. He has a good line of clavicords from 1500 to 1800, and he says he supplies them partially made (all the tricky parts done) for about 2/3 the price. Ditto his harpsichords, at about half price. They look very good.

Herbert Brubaker, 917 O Street, P.O. Box 222, Lincoln, Neb., 68508. Makes a really neat looking harpsichord kit, \$590 complete with everything but liquid finishing materials. He says you can make it in 60 to 80 hours (not including finishing) using no special tools, and no clamps. It is a big, versatile, well designed instrument. He also says he ships kits the same day the order is received.

Zuckermann Harpsichords, 115 Christopher St., N.Y., 10014 is also answer if you want you know. His harpsichord kit is \$150, produces a rather ugly, sparse, unusable instrument with amazingly loud tone. He makes a clavicord kit for \$100, but all you get is a keyboard, piece of plywood for soundboard, some wire and other odd bits and pieces.

Frank Hubbard, 185 A Wyman St., Waltham, Mass., 02154. Fantastic maker of instruments (all harpsichords). He makes a kit (\$700 for one keyboard, \$900 for two) which is difficult and exciting and it is to be undertaken by experienced woodworkers, but which makes an instrument about as good as any you can buy (including the \$4000 ones!) Top of the line stuff, for serious people only.

William Post Ross, 791 Tremont St., Room 515, Boston, 02118, though mostly a serious maker of fine harpsichords, has a virginal kit (maker's mark) for about \$300. Virginals are smaller than harpsichords, with a rounder, "bubbly" sometimes louder tone than harpsichords. They don't take up much room in a house. His kit produces a historically accurate 18th century Italian instrument.

S.R. Williams, 1229 Olmsted Dr., Los Angeles, 90065, makes kits, for a small harpsichord, a triangular spinet, and one or two other things. But I've lost the brochure. They looked good, though, not too expensive.

More stuff: H.L. Wild, 510 East 11 St., N.Y., 10009, is a fantastic source for guitar supplies. He has all the woods (Deluxe German German Silver spruce etc), necks, rosettes, fret wires, tools, books, everything. Really great. Benjo parts too.

I don't know if you want all this junk or not, but I suspect that the kind of people who want to stop killing, stop eating plastic food, stop building plastic relationships, get off the ladder of success, who want to smell trees, and hear the little notes in the old, would also like to hear and make music, and make their own instruments. If nothing else, and in the bookends of Kentucky there is a clavicord freak (who would have thought...)

Harold R. Langland  
Murray, Kentucky

## The Art of Organ-Building

If you like the idea of combining architecture and musical instrument design, this book is the standard of pipe organ construction. Hey Baer, could we drive one with solar energy, or would it only work when the wind was blowing?

**The Art of Organ-Building**  
George Ashdown Austley  
1905, 1965, 1368 pp., 2 vols.

**\$20.00** postpaid

from:  
Dover Publications, Inc.  
1801 18th Street  
New York, N.Y. 10014

or WHOLE EARTH CATALOG

TRUMPET, Gar., TROMPETTE, Fr., TROMPETTE—This is probably the best generally, the most important read in the Organ, adding richness and dignity to every combination of stops into which it enters. So important and useful is a good TRUMPET, 8 Ft., that no Organ of any pretension is built without one. The proper tone of the TRUMPET is imitative of that of the orchestral instrument; and there is almost universal scope for the skill of the reed voicer in the production of this stop. The tubes of the TRUMPET are of metal and of inverted conical form and normal speaking lengths.

Burton Harpsichord

## Three Centuries of Harpsichord Making

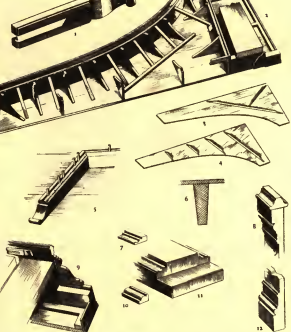
Have you ever heard a harpsichord? If I'll make a gentleman out of you. For some reason I have this conviction that harpsichord-makers aren't afraid of dying. This book revels in the 16th, 17th, and 18th century. The workmanship and music thereof.

—SB

**Three Centuries of Harpsichord Making**  
Frank Hubbard  
1925; 420 pp.

**\$12.95** postpaid from:  
Harvard University Press  
79 Garden St.  
Cambridge, Mass. 02138

or WHOLE EARTH CATALOG



In this book my purpose has been to record the traditions of harpsichord making as they might have been transmitted to young apprentices in any one of the several countries in which this instrument flourished. I have intended to give enough information to make it possible for builders of harpsichords to learn the certain knowledge of the designs and methods of earlier makers; to guide players of the harpsichord in their search for appropriate instruments, dispositions, and registrations in re-creating the music of the past; and to serve as a useful body of information for historians and editors of early keyboard music.



Wooden pipe of a Principal or Open Diapason, 16 ft.

## Building Electric Organs

Books: Electronic Musical Instruments by Richard H. Dorf (president of Schober) is available 1) from

Schober Electronics  
43 West 61st St.  
New York, N.Y. 10023

and 2) from Ubricex, C. 1968

Frequency Divider Organs for the Constructor (hardbound) and An Electronic Organ for the Home Constructor (hardbound) written by Alan Douglas, published in England by

Sir Isaac Pitman & Sons, Ltd.  
39 Parker St.  
Kingway, London W.C.2  
England

in preparation, same author and pub; Transistor Elec. Organs for the Amateur. Also from: Synthes Organ Corp.  
43 West 61st St.  
New York, N.Y. 10023; literature and plastic demo record on request.

## Electronic Organs

I. "Electronic Musical Instruments" hardbound only, \$10 ppd., is 1) a buyers guide to commercially available organs and 2) an instruction manual on technical aspects of elec. organs generally. Dorf is a leading authority and received cooperation from all the companies whose organs were reviewed.

II. The two books by Alan Douglas are plans, circuit diagrams, etc. for home construction with parts bought at a radio supply store (a complete list of which is in the index). "An Electronic Organ for the Home Constructor" deals with a G.C.O. Standard organ with separate generators for all tones. "Frequency Divider Organs..." involves a more common modern system in which separate generators are used for the highest octave in the organ and all other lower tones are produced by division. Both books deal with tube and valve types; a solid state edition is said to be in preparation.

III. Kits: While the Douglas books all require a rather solid backing in electronics, persons who require, solder, and have time, can probably manage any organ in kit form. HEATHKIT! THOMAS has two models with an impressive array of gaudy and questionable use materials. SCHROEDER ELECTRONICS has open models, with base price from about \$500 to \$1850. Numerous money-saving (or cost-spreading) routes of purchase are open, including buying in pieces (in the order you will need them for construction), cabinet kits, buying no cabinet and receiving plans for use with lumber of your choice, addition of a later date of optional equipment (reverb, percussion, etc.). LP demo records available. Literature and plastic demo record free on request.

[Suggested and reviewed by Charles Quirk]

## Clavichord Advice

Relatively simple kits available in varying degrees of completeness: from one where you must do all the cabinet and need a reasonable woodworking shop to one that requires only hand tools.

Wallace Zuckermann, Herbert Brubaker

A full size concert instrument in kit form designed by one of the modern masters. 1600-600 hours. Frank Hubbard.

Supplies and parts for scratch builders:

B & G Instrument Workshop  
8012 Forest Drive N.E.  
Seattle, Washington 98115

Superb Custom Instruments, Harpsichords, virginals, spinets, and clavichords in elegant period cabinets:

B. W. M. Benn Harpsichords  
424 Judson Lane  
Minneapolis, Minnesota 55435

They might also be interested in another dulcimer or psaltery kit source:

Here Inc.  
410 Cedar Avenue  
Minneapolis, Minnesota

Sincerely,

Bradley W. M. Benn  
Minneapolis, Minn.

## Zuckermann Harpsichord Kits

I'm an enthusiastic backer of Zuckermann kits for harpsichords and clavicords. Zuckermann levels with you about the difficulties involved, then makes it all easy with step-by-step and excellent instructions. The harpsichord weighs about 150 lbs and can hold its own as a solo instrument or in chamber groups. The clavicord is a suitcase-sized delight, very expressive but very soft, quick to assemble, and easy to carry along on trips or to have in a very cramped dwelling. There are more historically authentic kits available, but none that will get you into Renaissance and Baroque music more quickly, more cheaply, and with greater satisfaction. Harpsichord kits start at \$150, clavicords about \$125.

[Reviewed by Edward Allen]

Zuckermann Harpsichords  
115 Christopher St.  
New York, N.Y. 10014

## H.L. Wild

good wood is getting scarce.

it takes a good while to grow a mahogany tree, wild has fine selection of instrument maker's woods, and the plans, tools, and books to go along with them, stamped across the front of their catalog that came to us was, "Due to World Conditions, Prices Changed Without Notice." I like that way of putting it.

-jd

H. L. Wild must be the most honored dealer we list. A number of readers have written us love letters about Wild's service, prices, advice, quality woods, and quality of store-keeping.

-SB

Catalog from:  
free H.L. Wild Company  
510 East 11th Street  
New York, New York 10009

Face or Top. Purchase two pieces of the Best Imported Spruce your pocketbook can afford. This is the sounding Board of the Guitar. These come in Matched Pairs 1/8" by 8" by 20", and must be joined together to make a full top. We will mark each pair how they are to be glued together with the FINE grain always in the center.

GERMAN MOUNTAIN SILVER SPRUCE.....Slow Growing  
Matched Pairs.....Full 1/8" thick, 7 1/2" wide 20" long  
No. 177 Concert Artist Grade.....per pair \$8.00  
No. 178 Free Lance Grade.....per pair \$7.00  
No. 179 Musician Grade.....per pair \$6.00  
No. 174 Vaudeville Grade.....per pair \$5.00  
No. 173 Commercial "A" Grade.....per pair \$4.00

## ELECTRUM BANJO NECKS

Already Carved Neck for 4 string Electric Banjo 27 inches long.  
26 7/8" Scale, using a 19 3/8 in. Finger Board.  
No. P 530 Maplewood Neck with \$6.50  
No. P 531 Mahogany Neck Figured 7.50  
No. P 532 Teakwood Neck Veneers 9.50  
With each neck we include enough Highly Figured Veneer to cover both sides of the Peg Head and Heel. Postage extra: \$1.50

## Ratajak Clavichord

To do this properly, I should have had one of my customers "suggest" it. That would get me out of the fairly contemptible position of trying to stick my clavichords up your butt.

Nonetheless, pictured is the latest clavichord to come out of my shop. Price is \$300, and intended to stay that way. The people who want them are keyboard players trapped in no-musical-instruments-always-sounds-better-for-these-clavichords make no more noise than a lethargic humbly.

If you want to hear it, write me and I can retrieve a tape of the thing. If you want to see it in the flesh, stop up by the shop in June. If you want more information, write

W. P. Ratajak  
300 E. Ashland Ln.  
Ashtabula, Oregon 97520



## Hughes Instrument Kits

Nice cheap shoddy instrument kits. I believe I'd try a few of these before I took on a Burton Harpsichord. Dulcimers (\$9-26), sitars (\$25), guitars (\$10-25), balalaikas (\$9-25), thumb pianos (\$3-6), Irish harps (\$25-35).

-SB

[Suggested by Charles Bence]



## Classic Guitar Construction

This is the only adequate book on the subject in English: it is worth your money even if you don't intend to build a guitar. Every method and tool described actually works, and the design and illustration are of the quality to be expected from a professional designer.

If you can work up your courage to the point of actually starting in, the following is good advice—

- 1) Buy a good 18" straightedge: a 3/4" x 1" dimension-ground steel bar (available from industrial supply houses) is the cheapest way. You need it to get the fingerboard really straight.
- 2) The fret slots must be .025" wide for most fret wire. Ebony is hard and brittle so the slots must be accurate. Most saws sold as "fret saws" won't work, so beware when buying.
- 3) (a) Make sure joints fit as near perfectly as you can make them before gluing.  
(b) If an operation doesn't come out right, do it over. Don't let yourself get away with any shoddy work.

The experience of building a guitar is guaranteed to change you, probably for the better.

[Reviewed by David Russell Young]



Guitar sales are soaring as factories in the United States and abroad work at top speed to fill the demand. Unfortunately, fine guitars cannot be made at top speed and mediocrity is the rule. In Spain, \$120 will buy a guitar of a quality that cannot be duplicated in the United States at any price except by a few private luthiers. Hand-made guitars start at about \$500.

## Guitar Mold

Hope this isn't too late for the last Whole Earth Catalog. I have an item to suggest for guitar makers: an electrically heated mold with an electrically heated shoe for bending guitar sides and bindings quickly and accurately. They are made of cast aluminum and are thermostatically controlled. The mold was developed by Mr. A. E. Overholzer, 618 Orient Street, Chico, California 95926, who won the annual competition of the International Violin and Guitar Makers Association in 1969. The cost of the mold and shoe is \$150 plus shipping from Chico and insurance. Order from Mr. Overholzer. I can vouch for the mold—on my first try I bent vertical grain rosewood sides perfectly and easily.

Rose-Ellen Leonard  
Chico, California



## Tune Your Piano

You can do a good job of tuning your piano with a few tools and a little information. The information is in the book *How to Tune a Piano* by H. Stanton Woodman. The book and the tools are available from Tuners Supply Company, 94 Wheatland Street, Somerville, Mass. 02145. The book, Stock No. 288, is \$3.50. The tools are in Stock No. 3100 Basic Tuning Kit for \$3.00.

To be up to pitch and in tune a piano must be tuned often. How often depends on the amount of use, seasonal humidity changes, and moving of the piano. A concert stage piano may be tuned weekly, but in a home having every 3 to 6 months is usually enough.

The usual charge by a piano tuner is \$12 to \$18. This is for placing the instrument in tune with itself, not bringing it up to standard pitch. This takes about two hours work and includes no repairs.

You will be able to do the same job in about 8 hours the first time and about 4 after a little practice. But a big saving is yours if the pitch of your piano is flat and you want it pulled up to standard pitch. A tuner will not do this unless specifically ordered as it takes 3 or 4 tuning sessions with a charge to match. You can do the job over a few weeks. All pianos built in this century are designed for standard pitch (A=440) and can be brought up to this pitch with a little work and care.

Refinishing or rebuilding an old piano can give you a good instrument for a small investment. Replacements for broken or missing parts can be purchased from Tuners Supply. Also they will rebuild parts of the action for you if you do not want to tackle this yourself. They do a beautiful job of recovering white keys, one thing that can make an old piano look a lot better.

A. C. Engle  
Sloat City, Iowa

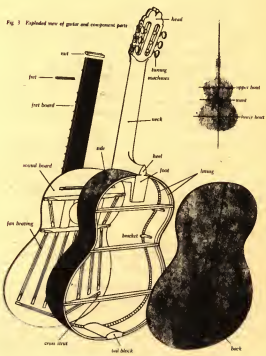


Classic Guitar Construction  
Ivory Sloane  
1966, 96 pp.

\$6.95 postpaid from:

E. P. Dutton  
201 Park Avenue  
New York, N. Y. 10003

or WHOLE EARTH CATALOG



What's this you're putting me in? Emmitt wanted to know.

It's e bus, said D.R. I've come from California in it. It's got a bad end everything. Emmitt said

He said goddamn you both for taking me.

The doctor said what's wrong? He said, what's wrong, old timer?

They say you can't breathe.

But Emmitt wasn't saying. He was captured

He was a prisoner now, he reserved the right to hold his silence, to keep all that he knew to himself, goddamn them all

goddamn

And he said no more, except madly, through drugs and semi-sleep and through the haze of death.

He never said another word he meant to say the three more days he lived.

Instrument Making  
Communications

333





Up till about two months ago it would have been impossible to even consider listing ourselves in your catalog due to the fact that our instruments were very highly priced; with a long backlog of orders. We felt at that point that we had an obligation and commitment to people other than the large money-making groups and single enterprisers (i.e. Bob Dylan, The Band, Richie Havens, John Sebastian, Jake Holmes, Judy Collins, etc.); so we reorganized the shop and started training people in building fine quality, handmade guitars.

We are now in the process of having our catalog printed. For the time being, we have enclosed a description and price list of all our instruments; we try to forward some pictures to you, so that you can see and judge for yourselves our high quality standard.

Yours faithfully,  
Michael Gurian  
Gurian Guitars, Limited  
100 Grand Street,  
N.Y., N.Y. 10013

## STEEL STRINGS

- Size 1** Mahogany sides & back; spruce top; black ebony fingerboard; Schaller machine heads; 12 fret to the body; plays best with light or extra light gauge strings; price, \$250.00
- Size 3** Mahogany sides & back; spruce top; black ebony fingerboard; Schaller machine heads; 14 frets to the body; plays best with light or medium gauge strings; price, \$325.00
- Size 3** same as above, but, with rosewood sides & back; price, \$425.00
- Jumbo** Mahogany sides & back; spruce top; black ebony fingerboard; Schaller machine heads; 14 frets to the body; plays best with medium or heavy gauge strings; price, \$300.00
- Jumbo** same as above, but, with rosewood sides & back; price, \$400.00

## Classical Guitars

- CL 1** Mahogany sides & back; European spruce top; black ebony fingerboard; Landstorfer machine heads, when available; price, \$325.00
- CL 2** Indian rosewood sides and back; European spruce top; black ebony fingerboard; Landstorfer machine heads, when available; price, \$425.00
- CL 3** Concert model; Brazilian rosewood sides & back; best quality European spruce top; black ebony fingerboard; Landstorfer machine heads, when available; price, \$525.00

## Flamenco

In keeping with the tradition of the flamenco guitar, I have designed a guitar that possesses the brightness and clarity of sound sought after by flamenco guitarists. In addition, my guitars have the sound projection of a classical guitar. For this reason, I use specially selected woods for the top, back, and sides. If preferred, the traditional Spanish cypress would be used. As in the classical models, Pervian mahogany and black ebony are used for the neck and fingerboard. The head may be fitted with friction pegs or Landstorfer machines. This model also has a handmade rosette. The price of the flamenco guitar is \$750.00.

## Lutes

- 1) Elizabethan:** This model is constructed with either 7 or 8 courses, depending on personal preferences. Woods employed are Pervian mahogany for the neck and black ebony for the fingerboard, curly maple for the board and spruce for the top. Rosettes are designed and handcarved in the traditional manner.

The price for this model is \$850.00.

## Guitars

Friends: here are a few things you might want to include in your catalog:

**C. F. Martin guitars:** There are a lot of things to look for in buying a guitar. Some, like the feel of the neck, are really subjective and individual with different musicians. But you also want to know that the instrument will last and improve with time and use. This is where the Martin company comes in. For a long time, they've been making honest, workmanlike guitars. The tone improves every time I play it. Martins are about the best steel-string acoustic guitars made in any country. They're a joy to play. They're not too good for riding freights/bumping because they're relatively fragile, but they hold up with proper care, for a long time.

**Gibson Electric guitars:** I don't like Gibson acoustics too much—some people find them really durable but I don't like their tone very much. Gibson electric guitars are another story. I've had a Gibson ES-335 electric guitar for quite a while. It has a beautiful neck, and will do almost anything in terms of tone production that you want from it. Things to look for in buying one are: 1) a good neck, 2) very transcendental pickup, 3) a good body. "21" "bucking" pickups are really the best on the market. Gibsons last forever. Mine's fallen off stages all over the country, & it's still good as new. If you buy a Gibson, try for one over 2 yrs old (pre-1968), otherwise examine the workmanship very critically.

**V. C. Squier strings:** These strings are really hard to find, which is a damn shame, because they're the best strings made in the U.S. They're smooth to play & will enhance the tone of any stringed instrument. I've only used my guitar strings, but I suspect the others they make (violin, etc.) are just as good. Bug your music store "til they get some in. Here are some kinds they make: ES-2500: Topol these are smooth roundbound strings, \$5.75 a set (list) & worth it. Also in light gauge, ES-2550. They also make nylon wound electric guitar strings, which I haven't tried. These could be really beautiful strings (ES-8000) V.C. Squier Co. 427 Capital Ave. S.W., Battle Creek, Mich 49016

Stan & Jane Davis  
Denver, Colorado



## Squier Strings

*the reason squier strings are so scarce (and perhaps the reason they are so good) is that v.c. squier co. is a very small operation—only 6 or 8 people, as stan says, though they are indeed the best string makers (I) around, and from what I've heard, they offer a service available nowhere else in the country (to my knowledge at least): they will custom-make sets of strings to your specifications. I know of a fellow who gets hand-made smooth round-wound strings with an elliptical core—easy on the fingers.*

*any guitarist who really knows what he wants will want to send them a letter of inquiry.*

V.C. Squier Co.  
427 Capital Ave. S.W.  
Battle Creek, Michigan 49016

Mark Tolaba

## Stewart-MacDonald Banjo

*I thought you might be interested in hearing about a company that specializes in banjo parts.*

## Catalog

\$0.25

from: Stewart-MacDonald Mfg. Co.  
Box 900  
Athens  
Ohio 45701

*They carry a full line of products, have a catalog, and operate entirely by mail. They also seem to give very fast service, and the quality of their products is very good. As they add new items, they publish supplements to their catalog which are apparently sent to everyone on the mailing list.*

Stephen R. Monaghan



## KROLL GEARED 5TH PEG

The best solution yet for keeping the 5th string in tune. 9 to 1 gear ratio eliminates slipping.

No. 38—Polished Nickel ..... \$14.50  
No. 39—Gold Plated ..... \$17.00

With Five Star tuning knob and thumbscrew—add \$1.50 to the above prices.

## The John Dubroff Instrument Makers List

*This arrived late and unexpected, so we're jamming in a piece of it. Why don't you start a Catalog, John.*

—SB

*This list originally started out with the intention of being "The Great North American Musical Instrument Maker List", but intentions being subject to change without notice (what with area informants, and half the instrument makers contacted, not replying), it has ended up essentially a Promotional Directory to the Central California area, with a few excursions to Elsinore in the nation.*

*Wherever you go, there are a good many more makers of instruments near you than you think. Many of them are like mushrooms, they appear suddenly and don't stay in it, or around, long. Doesn't necessarily mean they do poor work. Scout around, go direct to the source—more fun than buying from a shop.*

*And catalog collectors, please spare these fellows listed here; none of them can afford your Habit.*

cheers,  
John



California  
R. Kent Klein  
675 Golden Gate Ave.  
San Francisco 94102  
Electric Violin  
Guitars: classical, steel string, electric; Electric Bases; Acoustic and Electric Dulcimers; Electric Violins, violas, cellos, and quintos;  
Irish harps; Hummels; Lyres; Viol da Gamba; Harpichords.  
Also available are various accessories, wood, tools, and custom made cases. Catalog free. Mail order, yes.

Patrick Armstrong  
3052 Telegraph Ave.  
Berkeley CA 94705  
phone: 549-1624  
Harpichords and clavichords made on order for rent or sale. Payments are around \$20-\$50/month; \$1000 for clavichords, \$2000 and up for manual harpichords; also pedal harpichords.

Capitaurus  
Box 15  
Felton, CA 95018  
phone: (408) 335-4478  
Appalachian Dulcimers, \$40 up to \$150; custom models also.  
African Thumb Piano, \$8; made of mulberry or ash with ten keys.  
Dulcimer price sheet available; mail order, yes.

Haldon Chase  
Rt. 1, Box 122  
Pasadena, CA 91104  
Renaissance Instruments: Lutes, Viola da gamba, Italian harpichords. No catalog; prices vary with individual instruments. Mail order, yes.

John Dubroff  
107 Graham St.  
San Francisco 94117  
phone: 666-0783  
Four-string Dulcimers: \$80; \$150, \$150 model comes with either carved animal head (sculptured) or carved scroll. Both models are made large for volume, so that they may be played with guitar.

Pucked Psalteries: 15 strings, \$60. Mail order, no.

The Dulcimer Works  
1722 W. Washington Blvd.  
Venice, CA 90291  
phone: (213) 821-8514  
Dulcimers: spruce face on all models. Walnut back and sides.  
\$89.50. Rosewood back/sides, \$150. Three or four string. Mail order, yes. Steel string guitars soon available.

Children Family  
P.O. Box 482  
Southeast, CA 95073

Traditional Appalachian Mountain Dulcimers. The two traditional shapes, three or four string; \$50 to \$65. Mail order, no.

Steven Freagard  
P.O. Box 377  
Cambridge, CA 93424

Woodwinds: flutes, recorders, double reeds. Exotic and native hardwoods are used for the woodwinds, which are made in any size or scale. When specified, they are fitted in carved wooden cases. Prices range from \$25 to \$100-plus. Catalog no, mail order, yes.

String instruments: All one-of-a-kind pieces, e.g. spike fiddle, large bodied drone, auto-type, etc. These are made from gourds, bamboo, hardwoods, and whatever else. Prices run from \$20 to \$500. Most of these string instruments are too bulky or delicate to mail.

Morris Freeman  
P.O. Box 392  
Paradise, CA

Dulcimer: 3, 4 or 6 string; electric also. Sizes vary, prices also from \$100 to \$200. Mail order/posally.

Dennis Grace  
3952 Telegraph Ave.  
Berkeley, CA 94705  
phone: 549-1604

Classic guitar: solid and up. Steel strings on request. "Acoustical research in the classic guitar."

Larry Higgins  
160 No. St.  
San Francisco, CA 94114

Guitars: classical, steel string, \$350 to \$400; electric solid body, \$375 (usually set up with two thumbpicks, Tune-a-matic bridge, Schaller heads)

Dulcimers: \$75 to \$100.  
Viols, \$450  
Clavichords, lutes, etc.

Mail order, no.

(continued)

George Peacock  
150 N. Ave. 144  
San Francisco 94114

Guitars: classical and steel string, also electric. Lutes and Viola da Gamba. \$300 to \$600 for instrument w/case. Dulcimers also. Materials and supplies for sale too: rosewood and spruce, purflings and bandings, fretwire, mother of pearl and abalone, shell tortoise shell, machine heads, etc. Mail order, no.

Robinson's Harp Shop  
Mount Laguna, CA 92048

Harpis: Irish, Paraguayan, "Mini-concert"; run from \$295 to \$435. Plans and instructions for constructing Paraguayan, \$15. Kits for Paraguayan go from \$130 to \$260. "Mostly" all piano strings, hardware. Also have kits for dulcimers, thumbpianos, lutes, etc. Also several other types of harps. Descriptive sheet available. Mail order, yes.

Roy Scott  
2747 Woolsey St.  
Berkeley, CA 94705

Thumb pianos: Vary in size from 7-1/2" x 4", \$7.50, up to 10" x 8", \$18.00. All are individually hand made and decorated; all are tuneable. Dulcimers: 3 sizes, these are individually hand decorated, range from \$7.00 to \$10.00. Free catalog, mail order only (add \$4.00 to cover postage).

Lynn B. Sears  
P.O. Box 144  
Laletta, CA 95551

Four string Dulcimers: made of any wood desired, exotic and native hardwoods, spruce tops. Handcarved scroll. From \$55 to \$110. Price list free; mail order, yes.

J. Witcher  
Ancient Instruments  
P.O. Box 952  
(107 First St.)  
Forestville, CA 95436

Medieval, renaissance, and Baroque keyboard, stringed, and woodwind musical instruments and kits.

Harpichords, Clavichords, Virginals, Spinets, ranging from \$750 for Spinets to \$4600 for German type Harpichord. Table model Virginal for \$275.

String Instruments: Eight different kinds; among the more familiar, Hurdy Gurdy, 10 keys: \$150; Minstrel Harp, 24 strings: \$75; Dulcimer, 3 sizes: \$30 and \$45; Paltry, 13 strings: \$25.

Woodwinds: 16 different kinds available, most in the area of \$25 to \$85.

Kits: table model Clavichord, \$100; Italian polygonal Spinnet, \$300; Hurdy Gurdy, \$75.

Catalogs in process of preparation. Mail order, yes. Formerly known as Renaissance and Baroque Musical Instruments, formerly located in Randsburg, Calif.

Henry Yeaton  
3230 Ellis St.  
Berkley, CA

So-called "primitive" instruments, unusual noisemakers, African marimbas, Thumb pianos, South Indian flutes, drums. Mail order, yes. Write for more information; catalog, no.

Elsewhere:

Lynn McSpadden  
Box 110  
Mtn. View, Arkansas 72560

Guitars: custom made only; "D" size steel string. From \$295.

Banjoes: traditional fretless.

Orkney Harpichords: \$5.50 w/postage.

Mandolins: lute shape, flat back. From \$95.

Paltries: write for price/description.

Dulcimers: many models available. Run \$68, \$85, \$95, \$140.

Descriptive price list available; mail order, yes. Also available are two books, \$2.95 each, containing songs (traditional) arranged for playing by the dulcimer: "Brethren, We Have Met" - hymns and carols, and "Four and Twenty", containing songs plus information on tuning and playing.

Frank Proffitt Jr.  
Rt. 2  
Todd, North Carolina 28684

also: Rt. 2  
Viola, North Carolina 28692

Fretless banjos, five strings, \$80.

Dulcimers: hourglass and teardrop shapes, heart sound holes.

Three string: \$80; four string, \$95. No catalog; mail order, yes; shipping fee \$3. These instruments made in the patterns of the late Frank Proffitt Sr.

Dennis Dorogi  
Ellicott Road  
Brooklyn N.Y. 14716  
phone: (718) 792-9012

Dulcimers: Six basic designs, 16 types overall—depending on wood used and number of strings. Start at \$70 and move up to \$175. A simple design, hourglass shape dulcimer available completely except for sanding and finishing, 3 string \$42.50, 4 string \$45.

Plucked Paltry: 20" x 7" x 3", \$45 postpaid, other models up to \$300.

Mini-paltry: 9-1/2" x 4" x 2", \$18.95 postpaid.

Schelltopf: five string, \$125; three string, \$95-\$100.

Information on request on other instruments: Hammered dulcimer, rebec, lyra, kantele, paltry, aralan harp, classical guitar. Brochure, price list available for \$24. Mail order, yes.

Appalachian Dulcimers  
232 W. Frederick St.  
Staunton, Virginia 22401

Appalachian Dulcimers: \$65, includes accessories, instruction booklet, carrying bag. Made of native wood, spruce top, rosewood pegs. Information sheets available. Mail order, yes.

Edward Merfield  
Merry Field Meadows  
Star Route A  
Inchellum, Washington 99138

\*Instruments designed out of my imagination, mostly harps; reproduction of ancient instruments—Greek, Egyptian, Medieval—maybe out of your imagination. The only instrument I am on a

production basis with is a small Lyre Harp with 15 strings, hand carved and mother of pearl inlay—\$200. The gourd harp pictured was on personal order, price around \$400." Mail order, yes. Delivery time, two months.

Rizzetta String Instruments  
4616 South 1st St.  
Arlington, VA 22204  
(703) 527-1829

Hammered dulcimers, oak frame \$200, black walnut \$300, plain hardwood, ex. \$80; mountain dulcimers, \$100; mandolins, \$300; guitars, \$400 and up; push-button harps, \$160. Mail order, prefer not but will consider.

## Dulcimers

I have noticed in the Supplement's to the Spring Catalog some questions Regarding Dulcimers, the following are Four Address which make Dulcimers & Dulcimer Kits.

Here Inc.  
410 Cedar Avenue  
Minneapolis, Minn. 55404

Home C. Ledford  
125 Sunset Heights  
Winchester, Ky. 40391

Appalachian Dulcimer Corp.  
232 West Fredrick St.  
Staunton, Virginia

The Dulcimer Shoppe  
Mountain View, Arkansas  
72560

## More Dulcimers

Here are some more dulcimer makers to add to your list in the January and March Supplements:

George Pickow  
74 Locust Avenue  
Port Washington, New York 10050

George Pickow is Jean Ritchie's husband and they make dulcimers in three shapes (teardrop, traditional, and semi-diamond) and with either 3 or 4 strings. The prices range from about \$40.00 to \$100.00.

The Magic Mountain Workshop  
Box 614  
Mill Valley, California 94941

[remarks omitted by request of Magic Mountain Workshop]

William Wallace  
19 26th Avenue  
Vermont, California 90291

He makes hammered dulcimers on request for \$100.00

They come with 3 or 4 different types of hammers.

Lynn McSpadden  
of The Dulcimer Shoppe  
listed in the January Supplement also makes fretless

banjos if anyone's interested.

If anyone is interested in making a dulcimer, Howie Mitchell's book, The Mountain Dulcimer - How to Make It and Play It - (After a Fashion) is very good. He's very good for understanding the fret structure and how the thing works. He also has stuff about chorded dulcimers playing and various instruments made from doors and a plan for making a "courting dulcimer" one played by two people. It's available from Folk Legacy Records, either separately or with a record.

Susan Barger

The Mountain Dulcimer: How to Make It and Play It  
Howard W. Mitchell  
50 page book and record

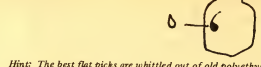
\$6.95 postpaid

from:  
Folk-Legacy Records, Inc.  
Sharon, Connecticut 06089



Home C. Ledford

## Flat Picks



*Hint: The best flat picks are whittled out of old polyethylene golf milk-jugs. Firm, but not noisy.*

Sincerely yours,  
Martin Spike Werner

All of these addresses responded with price lists & descriptions, the prices range from \$18.00 For a Kit to \$125.00 for a completed Dulcimer. I ordered a Kit from Here Inc. It arrived within 10 Days with comprehensive instructions for Assembling. For other names of manufacturers consult Sing Out. Jean Ritchie also makes Dulcimers But I have no information concerning her at this time.

Sincerely,  
Rick  
Wooster, Ohio

## More Dulcimers Continued

Some more dulcimer sources:

N.T. Ward, Jr.  
Vilas, N.C. 28692

[Suggested by Chuck & Kathleen Miller]

Berea College  
Berea, Kentucky

[Suggested by William Taylor]

Peacewood Dulcimers  
Box 189, Route 1  
Lawton, Michigan 49065



Estelle.

Dear Estelle,

Estelle, honey,

Dear Estelle, I'm sitting by my uncle's bedside in the hospital now. In Blaine, Kentucky. This sweet little hospital where believe it or not I was born about five centuries ago. And my poor old uncle is dying, and I am tending to him while he does. It's after midnight now. We've been here since this morning. And it's a struggle.

Dear Estelle, I'm sitting by my uncle's bedside in the hospital now. We've been here over twelve hours, and he's dying.

Estelle

D.R. helped Emmitt sit up to pee. He was having to pee every ten or fifteen minutes now. Or at least he thought he had to and each time he thought he had to D.R. had to help him up because Emmitt didn't know himself until he sat up, and even if he did know he couldn't say so because he was so far gone in his mind. Drinking and the treatment. That was it, all right. Flush him out. He was drowning in his own internal fluids and the only thing to do was fill him up and pour him out and that was D.R.'s job and he tried to tell Estelle about it in between the pee times.

He yells water-time! It's water-time! and I look to see which one he means, put it in or take it out. Sometimes he doesn't know himself. Once this afternoon I had a glass up to his mouth and he peed all over the floor. And later after he'd let some out in the jar he turned it up to drink it. His eyes are yellow as lemons now. I wonder what crazy point of view goes on behind them.

Leonard came and went. I don't know who you are! Emmitt yelled. You're a mystery man, what are you doing here? Who's in charge?

I'm Leonard, Leonard said. I'm your friend. I'm your neighbor. I'm taking care of your rabbits while you're sick, do you remember them?

Kill 'em! Emmitt shouted. I want all them rabbits dead, do you hear me?



## Carroll Sound

Getcher Chinese Bell Tree (\$38.50) your Sheng (\$59.50), your 2-string oriental violin (\$17.50), your shenhai (\$35), your santoor (\$240), your train whistle (\$38.24), boing box (\$40.00), lion roar (\$45), horse hoots (\$4.50), and storm (\$69.50), and more. Get em all and start a band.

Carroll Sound Inc.  
Box 88  
Patterson Park, N.J. 07650



### CHINESE MUSETTE (So-Na)

A typical Chinese double-reed instrument. Wood portion is attractively scalloped and polished brass components used throughout.

- C5-29-1 Chinese Musette (large) \$14.95  
C5-29-2 Chinese Musette (small) \$12.50

### M 3-Tone Train Whistle



M \$4.50

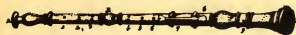
### Homemade Harps

Gents,  
I was told—by a friend at Stanford Research, that you folks might be interested in my business. Frankly it isn't much—but I sure like it.

Robinson

### ROBINSON'S HARP SHOP

P.O. BOX 141  
MOUNT LAQUE, CALIFORNIA 92048



Woodwinds, etc.

I enclose a sheet on my activities, if you can use it. Also an article on baroque shoes for your information.

I have several friends in this area who make harpsichords professionally:

Sandy Fontuit (sp?), San Francisco  
Richard Mexandis, 1281 Heurt, Berkeley  
Thomas Haynes (no father), 1607 Webster St., Berkeley 94705.

Other early woodwind makers I can recommend:

Friedrich von Hume, 59 Boylston St., Brookline, Mass. 02146 (I apprenticed with him)  
Sandy Lemberg, 42 Kincaid St., Cambridge, Mass. 02139  
Robert Mannin, 6 Main St., Haverhill, N.Y.  
Hans Coulaou, Oude Gracht 305, Utrecht Holland (I enclose a sheet on his instruments you are importing. He also makes very good cheap recorders \$25. also)  
Klaus Scheele, 2854 Loxstedt, Dunsenfabrikstrasse 40, W. Germany. Hope this is of help to you.

Best wishes  
Bruce Haynes

Bruce Haynes  
Baroque Woodwind Replicas—Repairs  
1260 Redwood Lane  
Lafayette, CA 94540

### Musical Saw

[Suggested by Scot Barner]

Musical Saw, lessons, and soft hammer, \$12.95  
Musical Saw, lessons, hammer, bow & rosin \$19.95  
Carrying case for the complete unit \$2.50 extra

Musehl & Wenzel  
Fort Atkinson, Wis. 53538



Mr. E. R. Hardy, Albion, Neb., 54 years old, who writes us "after 25 minutes practice I played 10 or more songs using the hammer."

## 336 Exotic Instruments Communications



### GONGS WITH STAND & Mallet FROM JAPAN (28" and 30")

—These gongs are so economically priced that they can now be added to schools and orchestras whose budgets might otherwise have been able to afford them.

These fine gongs are every bit as good as gongs of considerably higher cost and come complete with stand and mallet.

- C5-23 Bass Gong, 28", w/stand & mallet \$165.00  
C5-24 Bass Gong, 30", w/stand & mallet \$195.00  
C5-25 Bass Gong Deluxe Mallet only \$ 15.00  
C5-30 7" Gong on stand with mallet

### Walton's Irish Harps

The kind of harp that is pictured on the front of the Guinness Stout bottle, on the label. The Irish Harp has had a number of interesting uses, including providing the accompaniment to which the Bard, an important part of the Celtic armies, would sound the enemy during battle. These harps were strung with steel wires, and probably sounded weird.

The Walton's company does not make steel-strung harps however, since we don't sing curses at the enemy in a war anymore. The harps they do make are very fine instruments, however. The quality is rather better than what one would expect of a comparably priced guitar. It is not necessary to be a homophile to like the Irish Harp, as it is very easy to learn to play, and adapts well to Simon and Garfunkel, and to most traditional Appalachian ballads. The Walton's company is all kinds of reputable, and it backs up its instruments with a degree of concern for the customer's satisfaction that I have never found in any domestic company.

[Suggested and reviewed by Louise B. Heite]

Waltons  
5 N. Frederick St.  
Dublin, Ireland  
"Brian Boru" 710/3 \$199.00



### Autoharps

I think autoharps are easier to play than guitars, mainly because the chording is done mechanically, thirty-six strings and twelve or fifteen bars of felt pads.  
push down a bar, and all the strings you don't want in your chord, are felt padded out, so you are left to figure out how to keep thirty-six strings in tune, and what to do with the hand that isn't pushing down bars.  
autoharps are cheap: thirty to forty dollars from Wards or Sears.

—jd

### Information free

from:  
Oscar Schmidt International Inc.  
Department B  
Gerden State Road  
Union, New Jersey 07083

## TABLA DRUMS

—Most popular drum of North Indian classical and theatrical music. While more properly referring to a wooden drum, the TABLA is most often taken to mean a pair of drums, one wooden and one metal. Includes rings and tuning hammer.

- C6-17-1 Tabla Set, Professional \$75  
C6-18 Tabla Drum Case, Fiber \$39



### Ceramic Drums

There are a couple of long time potters in Berkeley who have begun in the last year or so to direct much of their energies towards making ceramic hand drums of all kinds. Jill Nelli and Peter Overton have produced Tambouras, Dumbaks (belly-drum), African Talking drums and many primitive, tuneable drums of their own design. I guess what excited me most about what they are doing is that they are into having you come to them with your own design—and working from that. At this point they use mostly goat skin heads, but then again that can be changed by you if you so desire. Prices range from \$15 to \$25 per drum, less shipping charges. Write to them at 2719 Stuart St., Berkeley, Cal. for more info and a price list. Both Jill and Peter will be out of town until Sept. 1, 1971 but will accept orders after then.

—Austin Jenkins



### The Sitar Book

A surprising amount of basic sitar in a few pages.

—SB

The Sitar Book  
Allen Kease  
1968; 63 pp.

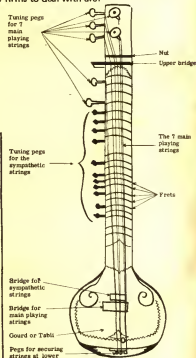
\$2.95 postpaid

from:  
Oak Publications  
33 W. 60th St.  
New York, N.Y. 10023

or WHOLE EARTH CATALOG

Extra strings can be ordered from Jimmy's Music Store, Terminal Music Store, Manny's Music Store, and Eastern Music Corporation, all in New York City. For information on sitars, and in case you are brave enough to contemplate ordering one direct from India, two of the most reputable firms to deal with are:

- Rikki Ram  
Connaught Circus  
New Delhi-1, India  
and  
Rati Ram and Sons  
Nali Sark  
Old Delhi, India



### Folk Style Autoharp

ask publications can get you started here's their autoharp book.

—jd

### Folk Style Autoharp

Harry Tausig  
1967; 70; 81 pp.  
\$2.95 postpaid

from:  
Oak Publications  
33 West 60th Street  
New York, New York 10023  
or WHOLE EARTH CATALOG

In this chapter we will return to the development of the right hand. So far all the melody notes that have been played by the right hand index finger have been played at the same times as the right hand thumb was playing a bass note. In other words, all the melody notes that we have played have been in pinches. In this chapter we will investigate melody notes that are not played by pinches.


Melody Flute

Musical instruments are extremely satisfying tools. However, in most cases the cost for quality instruments is restrictive. The Melody Flute is an exception. For from \$1.00 to \$17.75 one receives a nickel plated, six holed instrumental of fine final quality, and an instruction manual.

It is easy to learn and a lot of fun to play.

The Melody Flute Company also sells a complete line of recorders at very reasonable prices.

[Suggested and reviewed by Winston Fowlkes]



No. 1

No. 2

Melody Flute

\$7.50 to \$17.75  
(information free)

from:  
Melody Flute Company  
126 Lafayette Avenue  
Laurel, Maryland 20810

- No. 0-Plastic Flute C with mouthpiece 50 cents-Book \$25 total \$75
- No. 1-Metal Flute C with mouthpiece \$1.25-Book \$25 total \$1.00
- No. 1-Metal Flute B flat with mouthpiece \$1.25-Book \$25 total \$1.50
- No. 2-Metal Flute B flat Professional Type \$150-Book \$25 Total \$175

\*Nickel Plated  
One price-any quantity.  
\$5.00-Above prices include postage on orders amounting to \$5.00 or more. On smaller orders add \$.25 per order for mailing costs.  
BOOK PRICES-Books alone-\$25 each-Any quantity-Postage prepaid on orders amounting to \$1.00 or more. On smaller orders add 10 cents for mailing costs.

Bagpipes

For those who may be interested in bagpipes- acquiring them or playing them, there is an excellent company in Scotland:

Hugh MacPherson Ltd.  
17 West Main Street  
Edinburgh T2, Scotland

Importing them yourself is about 4 times cheaper than buying one over here. Furthermore, the quality is better and the service is extremely courteous (although slow). It takes 3 months to get your bagpipe after ordering it. It is worth it however. A full sized bagpipe- full mounted in imitation ivory costs about \$84.52 in American money (at the current rate of exchange). That's another thing they'll do for you. They'll translate their prices into recognizable money symbols for Americans.) In California, a cheap Pakistani imitation Scottish bagpipe costs \$150.00!! Since MacPherson's things are made of selected African blackwood and constructed with an old fashioned pride-of-craftsmanship, there can be no comparison. Their fanciest, a full mounted model in H.M. silver either chased or engraved costs 170 pounds. (let someone else translate that into dollars. I asked them for price translation of the low priced models.) Furthermore, they even offer a miniature bagpipe suited for indoor playing for about \$50 (£22 10 0). They sell also practice chanters, instruction books, collections of the Gaelic Mor, maintenance accessories and even superluous goodies like Highland costumes for performers. They will send you a catalogue (of sorts) if you write them. I highly recommend the practice chanter for starting. It costs about \$3 for the simplest and will teach you the notes and let you play MacPherson's. An excellent beginners instruction book is the College of Piping Tutor Book 1, by Seumas MacNeill and Thomas Pearson. Also order extra reeds with your chanter. The plastic ties last a long time.

-Tiny Alice  
Los Angeles, California

Mittenwald

I suggest the Mittenwald Co. of Chicago, importers of fine recorders and other instruments. The recorder, as most everyone knows, is one of the easiest instruments to learn to play while still remaining a challenge to the virtuoso. They are great fun to play in groups (I'm a concert 'er). There is a vast repertoire of music for them. They take up little room and aside from an occasional swabbing and oiling of the bore are practically maintenance free. While cheap instruments are available for two and a half dollars, for the person serious in getting going with them, I recommend the Adler or Moeck line of recorders. For really ambitious people there are reproductions of baroque, renaissance oboes, bagpipes, shawms, rackets, cornetts, serpents, etc. available on special order.

William M. Fletcher  
CINC PAC fit Band

Mittenwald Company  
1565 W. Howard St.  
Chicago, Illinois 60626

That's about it. There are also a number of books about and recordings of shakuhachi music which I think people may be interested in. These too are kind of obscure and difficult to track down through regular channels. I can provide a list if needed.

Monty Levenson  
Rt. 1 Milltop Dr.  
Willits, California 95490

Violin Repair

I learned violin repairing from a guy right out of a Breugel painting in Boston. Information which he passed along and is useful if you desire to repair a guitar. So- some how to and some where to.

1. Cracks in top or back, on a violin you can take the top off and pull the split together- I would not suggest trying this on a guitar because of various construction differences. Best thing to do is fill crack with shap (splinter of wood cut (shaped to crack), spruce, or whatever the top is made of. There would be stuck in with a suitable glue. The glue must be "Tirebond," (which is slightly yellow (otherwise like elmers) is best. Can be gotten at some hardware store- look around for it. More expensive but waterproof and strong. If can't find it it is made by: The Franklin Glass Company Columbus Ohio U.S.A. 4- eight fluid ounce container (like elmers) \$1.40

2. Tiny cracks can be filled with "Tirebond."
3. Broken neck (guitar) where neck joins body, glue on with epoxy- drill hole and insert 1/2 inch wood (birch usually) dowel, coat the dowel with "Tirebond" before you stick in. DO NOT fill hole with glue and drive in peg (dowel) this will give most demonstration of how hydraulic pressure can split wood. If tremendous strength is necessary use a thick metal screw. (drill out)

Broken neck other places.  
Never have done it but some kind of pin, peg or dowel between the two pieces is highly recommended. For finishing materials and glue of other types for use in guitars or furniture (either main brands). H. Rehn Bros. Inc. 10 Christopher St. New York, N.Y. 10014

ask for catalogue and price list (they are separate) They are prompt, fast, and useful. (ask about anyhow) they make a really beautiful white shellac.

- Home recipe No. 1 for a good violin/poly varnish
1. combine thin "anadur" resin in a jar with alcohol (rubbing type) enough alcohol to cover the anadur and 1/3 more
  2. let stand to dissolve for a week (until it all dissolves)
  3. drain through cheesecloth
  4. combine with equal part of good quality white shellac
  5. Powdered alcohol can be used with it. (gets this at some art stores)
  6. Thin with alcohol

Stephens Till  
Concord, Mass. 01742

They were water-time again and Leonard went outside while D.R. helped his uncle up and held the jar.

Leonard wanted to know if there was anything he could do. I'll stay with him tonight if you want me to.

D.R. shook his head. I'm okay. I sleep a little, off and on. If you feed his animals I can take care of this and here just fine.

Leonard heard a can, a tan dollar bill. You'll need to see, he said. D.R. took it and thanked him and started down the hall. Hey Leonard!

Hey Leonard, I wonder if you'd mind calling Marcella.

Momma already has, said Leonard. She called her this morning.

I'll see you later, D.R. said.

And then it was time to shave him.

Two orderlies came in to shave Emmitt, young fellows, not particularly agree for the job. The doctor wanted it done, they said. And D.R. didn't argue. I'll do it.

I'll do it, D.R. said, and he took the tools from the orderlies and went away.

Scissors.

Comb.

Razor, shaving cream. I'm going to give you a haircut and a shave, Emmitt.

Huh?

Wind Instruments  
Communications



## Horns, Strings, and Harmony

This is a very clear and fairly comprehensive introduction to musical physics, with suggestions for experiments to be performed by the reader at home. It is a paperback of 260 pages with a good bibliography for further study. The author is a physicist and musician; the book is written for musicians and amateur physics teachers.

There are three main divisions of subject matter:

- 1) Theoretical discussions of the principles of vibration, Chapters I, II, and VII
- 2) Practical applications, Chapters IV and V — the physics of hearing, Chapters VI, VIII, and IX — instrumental design (strings, brass, woodwinds)
- 3) Homemade wind instruments, Chapter X.

Familiarity with algebraic concepts is necessary throughout; access to musical instruments is helpful. Most of the experiments can be done at home without too much difficulty or expense (whistles, string, beads, etc.). The chapter on homemade instruments is for accomplished wind instrumentalists who are also confident with hand tools.

[Reviewed by Peter Lynn Sessions.  
Suggested by Allen Watson III]

## The Acoustical Foundations of Music

Here it is, folks! The hard-core treatment of the physics of music. You'll get the most out of this one if you enjoyed high-school physics. If you hated physics, skip this one and try Horns, Strings, and Harmony by Benade. You may end up with this one later.

Backus put everything into this book that he would like to cover in a college course (for musicians) but couldn't because there is too much of it for one semester. He likes to play with equations, and gives a lot of them, but I couldn't use them to compute the power output of a guitar string. Designers of instruments who want to start from the ground up should read at least parts of this book. A theoretical tool if you're into theory-building. I haven't had it long enough to see if it serves as a useful reference source.

[Reviewed by Peter Lynn Sessions]

### The Acoustical Foundations of Music

John Backus  
1969: 312pp.  
\$9.75 postpaid  
from:  
W.W. Norton & Co., Inc.  
55 Fifth Avenue  
New York, New York 10003

or WHOLE EARTH CATALOG



FIG. 1. Multiple reflections from the walls of a room of a single impulse produced by a sound source.

## Oak Publications

I was interested in your inclusion of autoharps, dulcimers, etc. As an old folkie this warmed the coxles of my otherwise hibernating heart. Well, y'n folks is gonna bald or buy these lindy things, they's gonna hafa lufe in play em, I reckon. And for what? May I suggest Oak Publications. Their list of books just keeps on growin like Topsy. Among the ones we've used and found valuable are "Note Reading & Music Theory for Folk Guitarists"—a most amazing book. Taught what and why a chord is, also how to create it. "Beginning the Folk Guitar," "Folk Singer's Guitar Guide, Vol. 1 & 2," "Folk Singer's Guide to 12 string, as per Leadbelly," "The Art of Folk Blues Guitar," "How to Play String Banjo by Seeger," and "The Dulcimer Book by Ritchie" have also been pretty nice to have around. Frankly, Oak's instruction books are the only ones I've ever seen that I could even RELATE to, let alone learn from, straight forward & well done.

In addition to these fine funky instruction manuals they have lotsa song collections (in case your memories a little fuzzy) for all shades of people. "Reprints from Sing Out" goes on for volumes & volumes, some better'n others (I mean where else can you find the words to "Plastic Jesus") and in addition they carry some off-the-wall collections from Russia, France, Egypt, etc. plus books on playing meddlers (to how to make em), dulcimer, recorder, fiddle, blues harp (another goodie), even sitar. Most of em are paper, usually illustrated, and around 2.95-3.95. But for my money Oak is THE publisher when it comes to down home funky music. Their address, by the way, is Oak Publications, 33 W. 60th St., New York, N.Y. 10023.

Love & peace

Andi Lewis  
Ottawa, Ontario

## Horns, Strings, and Harmony

Arthur H. Benade  
1960: 269 pp.  
\$1.45 postpaid

from:  
Doubleday & Co.  
501 Franklin  
Garden City, N.Y. 11531

or WHOLE EARTH CATALOG

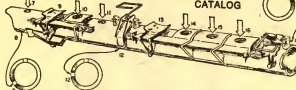


Fig. 46. Overall layout of machinery for a Boehm-style flute. The large arrows show the flow of sound waves, while the smaller arrows indicate the position of the reed in the air. The right-hand part of this diagram also applies to the clarinet.

Thus we see that the real test of a good instrument is not in the ears of the listener, but rather in the hands of the player. If he can get the range of effects he wants, without strain, then he has a good instrument. Except in a minor way, by clearing away some of the most obvious stupidities, physics has not been able to help him very much more than has the witchcraft that has grown up to lull and rank-around this beautiful instrument.

Once again the flute is different from other woodwinds; it needs no ball for two reasons: first because the vibration recipe of any flute, old or new in style, is so lacking in the higher components that very little sound energy is present above the change-over frequency, and second, the very large holes of the modern Boehm flute serve to cut off the tube so effectively that all the notes tend of themselves as coming out of the end of an ordinary pipe.



WOODWINDS

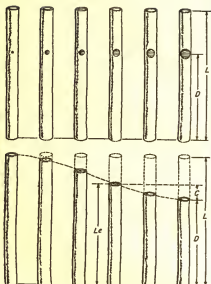


Fig. 46. The size of a side hole affects a pipe's vibrational frequencies. The extent of the effect is illustrated here by comparing different hole sizes with pipe lengths that give matching frequencies. Each pipe in the lower row has a frequency matching that of the holed pipe immediately above it.

## Improvising Jazz

An exceptionally clear explanation and analysis with original examples of the concepts basic to modern jazz composition and instrumental improvisation. But the title is deceptive. Modern jazz is 20th Century harmony superimposed on traditional types of chord progression, and this book should be of use to any student (or teacher) of musical practice.

The fundamental ideas of chord structure, notation, chord progression, modulation, and variation of motive and thematic material, including a simplified chord symbolism, are presented in edible portions. The discussion of the more exotic concepts of chord/scale relationships, chord superimposition, and functional chord substitution, are among the best I have seen, including college texts. This book is a solid value that becomes more and more useful with every rereading.

[Suggested and reviewed by Peter Lynn Sessions]

What is the soloist doing when he attempts to "build"? Actually the ideal process hardly ever takes place—that is, it is hardly ever the case that a conscientious soloist plays a thinking solo for a hard-listening hearer—but when this does happen, the key process is memory. The soloist has to establish for the listener what the important POINT, that motif if you like, is, and then show as much as he can what it is that he sees in that motif, extending the relationships of it to the basic while never giving the feeling he has forgotten it. In other words, I believe that it should be a basic principle to use repetition, rather than variety—but not too much. The listener is constantly making predictions; actual infelicitous predictions as to whether the next event will be a repetition of something, or something different. The player is constantly either confirming or denying these predictions in the listener's mind. As nearly as we can tell (Kraehenbuell at Yale and I), the listener must come out right about 50% of the time—if he is too successful in predicting, he will be bored; if he is too unsuccessful, he will give up and call the music "disorganized."

## Improvising Jazz

Jerry Coker  
1964: 115 pp.  
\$2.45 postpaid

from:  
Prentice-Hall, Inc.  
Englewood Cliffs, N.J.  
07632

or WHOLE EARTH CATALOG



## Kord

I can plunk an autoharp some, whistle a little, used to have a trumpet lip, but I'm now theory blind. Kord is a new music theory practice magazine, for people who are trying to understand music while they are plunking and whistling. looks pretty useful.

—jd

[Suggested by Peter Sessions]



## Kord

Eric Kriss, ed

\$2.00 4 issue subscription

from:  
Box 531  
Northampton  
Massachusetts 01060



\$3.95



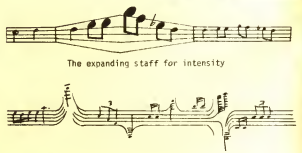
\$2.00



\$2.95



\$2.95



The expanding staff for intensity

Exploding staff for dynamics

In future issues, KORD will be publishing original compositions of a varied nature. Submissions are welcomed. Preference will be given to previously unpublished work.

## Economics

All the fundamental economic principles are in this text book. It is just the thing for anyone who wants a basic familiarity with the subject. No previous knowledge of economics or any other social science or math is required. I got through an economics major in college relying almost solely on this book.

[Suggested and reviewed by  
Dave Shapiro]

## Economics

Paul A. Samuelson  
1955; 1970; 868 pp.

\$10.95 postpaid

from:  
McGraw-Hill Book Company  
330 W. 42nd St.  
New York, N.Y. 10036

or WHOLE EARTH CATALOG

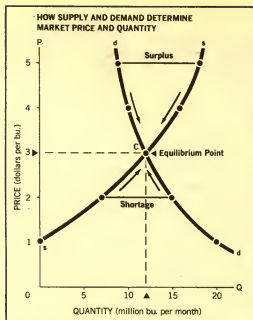


FIG. 4.3. At the C equilibrium intersection, the amount supplied just matches the amount demanded.

At any lower P, the excess amount demanded will force P back up; and at any P higher than the equilibrium, the amount supplied will be excessive and P will be forced back down to the equilibrium level.

A good final warning in economics is this: things are often not what at first they seem. The following true statements provide examples:

1. If all farmers work hard and nature cooperates in producing a bumper crop, total farm income will fall, and probably will.
2. One man may solve his own unemployment problem by great ingenuity in hunting a job or by a willingness to work for less; but all cannot necessarily solve their problems in this way.
3. Higher prices for one industry may benefit its firms; but if the prices of everything bought and sold increased in the same proportion, no one would be better off.
4. It may pay the United States to reduce tariffs charged on goods imported, even if other countries refuse to do likewise.
5. It may pay a firm to take on some business at much less than full costs.
6. Attempts of individuals to save more in depression may lessen the total of the community's savings.
7. What is prudent behavior for an individual may at times be folly for a nation.

Let us emphasize: Each of the above statements is true, but each is outwardly paradoxical. In the course of this book, the seeming paradoxes will be resolved. There are no magic formulas or hidden tricks. It is typical of economics that anything which is really correct must seem perfectly reasonable once the argument is carefully developed.

At this point it is just as well to note that many of the above paradoxes hinge upon a single confusion or fallacy. It is called by logicians the "fallacy of composition." In books on logic, this is defined as follows:

**Fallacy of composition:** a fallacy in which what is true of a part is, on that account alone, alleged to be also necessarily true of the whole.

Why study economics, is a famous one given by Lord Keynes. The final lines of his 1936 classic, *The General Theory of Employment, Interest and Money*, consist of a famous passage:

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than you can imagine. I firmly believe that if the general mind of man is commonly understood, indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some delusional economist. Madmen in authority, who hear voices in the air, are wiser than the wisest of us. This is the danger of the world today. I am sure that the power of vested interests is vastly overestimated compared with the gradual encroachment of ideas.

Unless proper macroeconomic policies are pursued, a laissez faire economy cannot guarantee that there will be exactly the required amount of investment to ensure full employment; nor too little investment to cause unemployment; nor too much so as to cause inflation. As far as full investment or money-spending power is concerned, the laissez faire system is without a good thermostat.

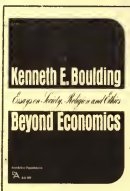
Limitation in the supply of money is the necessary condition if it is to have value. If currency is so unlimited in amount as to become practically a free good, people would have so much of it to spend as to bid up all prices, and incomes sky-high. That is why constitutional powers over money and banking are never given to private groups, but are always vested in government.

Many writers have tried to read into economic history a linear progression through inevitable stages, such as primitive economy, feudalism, capitalism, and some form of communism. The actual facts have not agreeably stuck to such timetables; in particular, the mixed economies that dominate the Western world came into being without the permission of social prophets.

## Beyond Economics

Since so many of you dwell on the fringes of society, I thought you might be interested in the fringes of economics where Kenneth Boulding thoughtfully paces. Those places where economics meets religion and ethics, meets general systems, social science, learning theory, evolution, and (watch it!) politics.

—SB



Beyond Economics  
Kenneth E. Boulding  
1968, 1970, 308 pp.

\$2.95 postpaid

from:  
University of Michigan Press  
615 East University  
Ann Arbor, Michigan 48104

or WHOLE EARTH CATALOG

Similarly atoms come and go in a molecule, but the molecule remains, molecules come and go in a cell, but the cell remains, cells come and go in a body, but the body remains, persons come and go in an organization, but the organization remains. What "remains" in the midst of all this flux of components is the "role," "mission," and the relations of roles one to another. A role is a whole, an organization is a related and orderly set of holes, and one sometimes catches a fleeting and slightly right-mish-vision of the scientific universe as a set of holes bounded and defined by other holes! The significance of almost anything, like that of a word, is derived largely from its context; everything, however, is the context for other things; context creates itself, ad infinitum.

Energy and matter can only be exchanged; knowledge can be produced.

The Communist society is a "one-firm" state"—that is, a society organized hierarchically into a single economic organization. It is simply General Motors (or perhaps more realistically, the Pentagon, which is in terms of national income the world's third largest Communist society) expanded to include the whole economy, with the possible exception of a few Newman and some surreptitious private trade. A capitalist society by contrast is "ecological," where the Communist society is "organic." A Communist society is a true Leviathan, a vast social whale; a capitalist society is more like a pond with a great multitude of interacting organisms bound together in a system of mutual exchange, or markets.

If a genuine learning process—the continual elimination of error in our image of the world, as well as the enlargement of its image—to take place, there must be safeguards against rejecting inferences or rejecting the image of the past.

Fleather wants to know

what is postmonetary economy?

fleather

Good question.—SB

## Supply and Demand

A briefer, more classic, and earlier account of economic theory is Henderson's *Supply and Demand*.

Bear in mind that economists are created by economies, not vice versa very much. Who does create economies? You. If you don't like the one you're in, invent and perform a better one. Do it informed or do it innocent, either one beats passive complaint.

[Suggested by Steve Baer]

- I. When, at the price ruling, demand exceeds supply, the price tends to rise. Conversely when supply exceeds demand the price tends to fall.
- II. A rise in price tends, sooner or later, to decrease demand and to increase supply. Conversely, a fall in price tends, sooner or later, to increase demand and to decrease supply.
- III. Price tends to the level at which demand is equal to supply.

It has become an axiom of business men that, while Governments can manage with more or less competence a safe and routine business like a Postal Service, their success would be unlikely to prove conspicuous in undertakings where the element of risk is great. There, it is said, we owe everything in the past to the enterprise of individual men for even joint-stock companies have not been notable as pioneers adventuring their own fortunes in accordance with their own unfettered judgment.



Supply and Demand  
Hubert Henderson  
1922, 142 pp.

\$1.35 postpaid

from:  
Cambridge University Press  
32 E. 57th Street  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



I said I'm going to trim you up a little. Cut your hair, shave all that beard off.

You do and I'll chase you from star to star,

You can't catch me, Emmitt, D.R. laughed. I'm one of them crabs, I'm on the moon, too fast for you to catch.

You'll see, Emmitt. You'll see how far your threats and bribes get from star to star.

But Emmitt's eyes closed, he fell into a fifteen minute dream, and wiffed D.R. cut his hair, not just hair, just as he felt competent to do with comb and scissors. And then he cut the beard away. Scissors. Comb. and as he worked D.R. saw his father's face take shape before him. The mouth, the little cleft in the chin. They'd looked so much alike, Emmitt and D.R.'s father. Royce. Somewhere there was a picture of them together in their Army uniforms, taken about 1944, home on furlough before going overseas, sitting on the front porch of the homestead, their arms around each other and their cheeks pressed together, mugging for the camera. And they looked so much alike you couldn't tell them apart except that Emmitt had on paratrooper boots and Royce didn't. Emmitt jumped into Holland, around Zindhoven, with the 101st Airborne, and got wounded there. A head wound. The scar is probably right down there in his hair, D.R. thought. But he had finished with the hair. There was just the beard now. Scissors, comb, he snipped and snipped, and then as Emmitt slept D.R. covered his face with a towel and carefully shaved him, stroke by stroke, pausing now and then to feel the smooth, clean skin as he cleared it of the stubble.



## Technological Checks and Balances

As the 200th Anniversary of the American Rebellion, Declaration of Independence, Constitution, etc. comes by, we can expect some useful reappraisal of the splendid old instruments.

They were an astonishing balance of utopian and cynical, the *Federalist Papers*, ready to try something new in a big way, and ready to acknowledge and use the omnipresence of unlighted self-interest.

For politics, for establishing a politically cybernetically stable system, they're still effective.

But for controlling technology, for stabilizing the economy and the drain on the environment, the American Constitution hasn't helped much. Neither has anyone else's.

## Fortune

*I started reading Fortune magazine after reading a lot of Buckminster Fuller because it was the only periodical with regular informative articles on his level of thinking [world shipping, construction, new industrial processes, natural resources, etc.]. What I found was editing and reporting that made the contents of most popular American magazines look like so much paste.* —SB

## Fortune

\$14/yr (monthly)

from:  
Fortune  
540 North Michigan Avenue  
Chicago, Illinois 60611

## THE WEALTH AND POWER OF THE OVERSEAS CHINESE

Millions of expatriate Chinese knit a strong web of commerce through Southeast Asia, from Burma to the Philippines. They dominate the economic life of villages, cities, and even nations in a part of the world where the native populations, because of cultural attitudes and historical colonial policies, often lack the experience and lust for profit that the Chinese bring to business. In many of the countries where they operate, the Chinese must deal with political instability and corruption, and racial hostility that sometimes erupts into violence. Some hostility also springs from the envy of less successful local residents because the Chinese, by their very enterprise, often preempt the available business opportunities. But as a group they survive and prosper, and many international banks and corporations find the overseas Chinese to be invaluable as managers and allies.

Many of the most prominent members of this international expatriate community, some of whom are pictured in the accompanying portfolio, are men who have been driven from one country to another by war or xenophobia, and who have had to start all over again in a new setting. This ability to build a new fortune in spite of another strange land is a telling testimonial to their extraordinary determination, and to their scurmen.

Fuller suggests that by amassing the technological and resource information and computer-related it, on-going solutions will be self-evident. I doubt if that will be adequate.

There are interrelation forms, formulae, missing. Inventions of information structure not yet made.

Since the early 1800's economics has been fiddling around intelligently with self-balancing mechanisms, but still hasn't done the job. Economics by itself is no more of a solution than politics by itself.

It has got to be acknowledged that technology has some self-propelling dynamics of its own that unless turned on themselves will accelerate to destruction like an un-governed motor.

## The Money Game

*I have been a close stock market observer for about five years and I am still amazed at the low level and inanity of writing about the stock market. Most books are so narrow and confined as to be virtually useless.*

The Money Game is the first really good book about the market that I have found. It doesn't try to tell you how to make money or even how to play the game, but it certainly may help you avoid losing. Its great value is in stimulating the reader to think about himself and his own relationship to gambling and about mass psychology and the way it influences price movements on the market. And it is funny and enjoyable besides.

[Reviewed by Dave Shapiro]

## The Money Game

'Adam Smith'

1969; 253 pp.

\$1.25 postpaid

from:  
Dell Publishing Company  
3601 Third Ave.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

Really big money is not made in the stock market by outside investors. That may be said as a shock to you. You may not even care, since by "really big" I am talking about millions of millions rather than just, say, one lousy million. It is certainly possible to make ten or twenty times your money as an outside investor in the stock market given enough time, enough intelligence, enough emotional detachment, enough luck, and somebody smart on the other end of the phone. It is possible because a lot of people have done it.

Who makes the really big money? The inside stockholders of a company do, when the market capitalizes the earnings of that company.

*Prices have no memory, and yesterday has nothing to do with tomorrow. Every day starts out fifty-fifty. Yesterday's price discounted everything yesterday. To quote Professor Fama, "the past history of the series (of stock price changes) cannot be used to predict the future in any meaningful way. The future path of the price level or a security is no more predictable than the path of a series of cumulated random numbers."*

Randomness as a way of beating the market is not limited to academics; of course, Senator Thomas J. McIntyre, Democrat of New Hampshire and a member of the powerful Senate Banking Committee, brought his dart board in one day. Senator McIntyre had backed the stock market page onto his dart board and thrown darts at it, and the portfolio picked by his darts outperformed almost all the mutual funds. (Senator McIntyre's darts thus supported the random-walk testimony of Professors Paul Samuelson of MIT and Henry Wallich of Yale, given when the Senate was considering mutual-fund legislation.)

Herman Kahn, the wide-ranging savant who heads the Hudson Institute, has observed: "When you ask a European what he does, instead of saying he's a clerk, he is likely to say, 'I'm a motor driver, or I'm a mountain climber.' ... Americans, tending in this direction; what a man does with his leisure is perceived, increasingly, as a key to his identity. Boasting enthusiasts—nearly nine million Americans own boats—identify themselves as a breed apart from golfers, and neither resembles bowlers or Sunday painters; among boating men, moreover, the sailing fans see themselves as distinct from land superior to the outboard-motor crowd."

The psychiatrist Erik Erikson of Harvard, who is perhaps America's leading student of adolescence and youth, has suggested forcibly that the new behavior patterns of the young in the 1960's may not represent any wave of the future at all. Erikson believes that "the available inventory" of pleasure-seeking experience will be tried by the young and found only moderately satisfying, and "new boundaries will then be sought from new ways of finding out what 'really counts.' Their judgment about what it is that 'really counts' is perhaps the largest of all the uncertainties about the U.S. economy in the years ahead.

*Saying the machine ought to slow down does nothing. The machine must be changed, the ability to address itself.*

The whole machine: from which economics, politics, ecology, computers, and we...are not separate.

If that means new and more encompassing Constitutional models, let's get cooking.

All we have so far is the old perpetually recurring stabilizing system of internal rivalry. Our technology addresses itself by means of war. That's cool: all systems go in for it. Stable systems have rules, however, and accomplishable tokens of victory and loss. Our present World War system is short on these.

Perhaps our effort should be to civilize war rather than eliminate it.

—SB '71

## An Alternative Future for America II

What's different about this book of economics is that it was designed by graduate students. Though Theobald is the soloist, the voices of the young generation can plainly be heard. It makes you wish that every author who writes about new ways of coping with the changing world would be forced to immerse himself in the lives of those for whom he purports to make predictions.

Because it reads like a collection of class notes and uncompleted journal articles (all of which is probably true), the book pulled me into it to read it as a chapter or two in my own. That is a delicious feeling, when you have been so many times bored by economics texts.

In fact, the book abruptly ends with a specific invitation to its readers to take some further action. I would hope subsequent editions will continue to have such an open-ended design.

The stuff to "wow" over in the book includes Theobald's high-level insights into computerized decision making ("There is no doubt in my mind that the computer has been one of the factors that has led us into the present disastrous situation in Vietnam"), and his list of the five traps we've laid for our social system: the war trap, into which we have put all our ultimate sanctions for solving international disputes; the efficiency trap, in which we place man's human value to be measured against the efficiency of machines; the consumption trap—if it's good, it must have a sales price and be advertised; and the education trap, in which we cement our behavior to the past. The fifth trap never gets listed—see what I mean: "unfinished journal articles."

Theobald's most orderly work has to do with his persuasive case for a guaranteed income, about which he has written for many years. The potentiality for his ideas during this distressed period of history are ever more dazzling. And in this book, the dazzlement is fully let loose in a series of chapters on the future of America with altered life styles. It may be weeks before I stop trembling. That's why I wanted to add another chapter or two, when I got to the end of the book.

[Reviewed by Richard Raymond]

## An Alternative Future for America II

Robert Theobald

1968, 1970; 199 pp.

\$2.00 postpaid

from:  
The Swallow Press, Inc.  
1139 Wabash Avenue  
Chicago, Illinois 60605

or WHOLE  
EARTH  
CATALOG

by ROBERT THEOBALD

"Our key problem stems from the fact that we have made the value of a man synonymous with the economic value of the toil he performs: we fail to recognize that people should have a claim on resources even if they do not toil. The measure of our values is, I believe, shown in the fact that those living in an industrial society find it natural that people do not receive an adequate amount of food, clothing and shelter even though there is surplus food in storage and the possibility of producing more housing and more clothing if we gave people the money to buy them. We can contrast this view with that of the so-called primitive societies; in many of these it was literally impossible to starve unless the whole community was starving. George Peter Murdoch, the celebrated anthropologist, described the reaction of one group of natives when he tried to explain the problem of the poor in Western countries. There was a long silence. 'How can he have no food? Does he have no friends? How can he have no house? Does he have no neighbors?'

We can anticipate the organization of what I have called "conventive": productive groups formed by individuals who come together on a voluntary basis, simply because they wish to do so. The goods produced by these conventives will not compete with mass-produced goods available from cybernated productive organizations; the conventive will produce the "custom-designed" goods and services which have been vanishing within the present economy.

# How To Become a Non-Profit Tax-Exempt Corporation, and Why, and Why Not

It's not as hard as you think.

A lot of people come to Portland looking for shelter here for their educational or other do-good project. Mostly we advise them to start their own cnc.

We asked the Law Commune in Palo Alto to write up the basic information, which follows. —SB

## SOME PRELIMINARY QUESTIONS AND ANSWERS ABOUT NONPROFIT CORPORATIONS\*

### What is a nonprofit corporation?

A corporation is a separate legal entity which the law allows to be created for the purpose of doing business. In the eyes of the law, a corporation is a separate "person" who has its own debts, owns its property, and pays its own taxes, and who, unless dissolved by its owners, lives forever. Nonprofit means that none of the owners, or "members," receive any financial gain or profit from the work being carried on by the corporation. This does not mean that officers and directors of the corporation do not receive salaries. It means that a nonprofit corporation does not have "investors" who in the case of a regular corporation would buy stocks or bonds in the corporation and receive a dividend or some other financial return on their investment. Instead of selling stock to stockholders, who are the owners of a regular corporation, a nonprofit corporation sells or gives "memberships" to members. These members do not receive dividends but they do perform the acts of ownership normally carried out by stockholders, such as electing the board of directors. The Board of Directors have the duty of watching over the corporation, making the major decisions, and of hiring the officers of the corporation, such as the president, the manager, and executive secretary who carry out the day-to-day business of the corporation.

### What are the advantages of forming a nonprofit corporation?

The advantages of operating through a corporate structure are all based on the concept of the corporation's being a separate person. As a separate person the corporation remains no matter what individuals come and go. Most important, the corporation's liabilities are separate from those of its owners or employees. Thus the corporation's debts cannot be collected from any of the individuals who own or work for the corporation, unless a creditor can persuade a court that somebody set up the corporation for the sole purpose of dodging personal debts. If the corporation goes broke nobody can get at the personal assets or money of the corporation's members. If an employee of the corporation causes serious damage in a traffic accident, the corporation will have to pay damages, but none of the employees and none of the members will have to pay the damages, even if the corporation itself is unable to pay.

The advantages of making the corporation nonprofit has to do with the corporation's ability to receive corporate income, that is, income on its own terms, but if a nonprofit corporation qualifies under Federal standards, it does not pay income taxes. Thus if a labor union, a religious organization, a college, or a hospital, or other nonprofit corporations, have more money coming in than is going out, they are able to pay the usual corporate income tax. Again, this corporate income should not be confused with the salaries of the individual employees which are still subject to personal income tax. Another advantage is that individuals who donate money to a nonprofit corporation can receive personal tax deductions for their donations.

Another advantage of a corporation is that its very existence lends stability and continuity to its enterprise, and makes it easier for people like bankers and local storekeepers who hand out things in credit.

### What are the disadvantages of having a nonprofit corporation?

You will have the initial expense of forming the corporation. Although there are manuals available most groups will have to hire a lawyer to do the legal work and will charge a minimum of several hundred dollars unless you can persuade him/her to do the incorporation as a public service (not likely). As a corporation you will have to keep careful financial records and file detailed tax returns concerning the corporation's finances. Incorporation means that you must in some way show proof of observance of specific regulations and formalities. For example, regular meetings of a board of directors: it also means someone will be watching to see that you have kept careful financial records, pay unemployment insurance taxes, etc.

There are other less tangible drawbacks. Persons working for the corporation will have to act with a high degree of care, since their actions will be subject to the scrutiny of the corporation at stake, for example in the traffic situation described above. Incorporation means that the enterprise will have a higher degree of visibility both with the community and the government. The existence of a corporation may increase the likelihood of its being sued. For this reason, most labor unions are not incorporated. Certain people such as internal revenue agents and the state attorney general will have the right to snooping into your affairs, if they think you are violating the purposes stated in your Articles of Incorporation or to check out any information you return.

### What exactly is involved in formation of the nonprofit corporation?

As was already stated, you will almost always have to hire a lawyer to do the formation work. But you can do a lot of the work yourself. As he/she is up to you. First you will have to select a name for your corporation and register it with the state—in California, specifically with the Secretary of State. You will have to select a name for more people to act as "Incorporators." Their duties are to sign the Articles of Incorporation and act as the board of directors at the first meeting of the board of directors. They may also be asked to elect a new set of directors who will act as the board from then on, or they may themselves continue to act as directors. They may be elected by any potential directors, that they are required to exercise reasonable care in running the corporation and if they fail they may be held legally responsible for their actions.

You will also draw up Articles of Incorporation. The law requires that these articles contain the name of the corporation, the names of the incorporators, and the county, where the principle place of business is to be located. The most important articles must state the specific primary use or purpose for which the corporation was formed. These purposes must be carefully chosen since they are the most important consideration in determining whether the corporation will be granted

nonprofit status for Federal tax purposes. Some time during this period, a set of by-laws will have to be drafted. The by-laws set out the rules for governing the corporation, for example, how are the directors to be elected, how are the meetings to be held, what are the meetings of the members to be called, what is the price of membership, what is the duty of members, etc. For a small corporation, such questions are mostly formalities and standard forms can be used. The Articles of Incorporation should be done first since the corporation's life begins when the Articles are filed with the appropriate state agency. Sometime during this period also, you will want to apply to the Internal Revenue Service and to the appropriate state agency for a determination that the corporation will be exempt from taxes. On the average, if there are no complicated tax problems, these procedures should be completed about a year.

This answer, and subsequent answers do not apply to charitable organizations such as the March of Dimes, whose regulation is both different and a great deal more detailed. Also, California considers co-operatives to be a special type of nonprofit corporation, and special rules concerning their formation. Unlike other corporations, the state does not give the parties freedom to choose their own Articles and by-laws. Instead it specifies such things as the types of officers there will be and how they are elected. However, a co-operative is also allowed to distribute some of its assets to its members. There is another special incorporating procedure which allows the head of a religious organization to act himself in a corporate capacity. It is termed a "corporation sole".

Once the corporation has been formed, you will not have to file any continuing types of reports other than tax returns. The only exception is if it becomes necessary to amend the Articles of Incorporation or by-laws, in which case you may have to file them through some type of major changes in its purpose or existence.

### Could you explain more about the tax angles?

As was mentioned before, the Internal Revenue Service will tell you before you begin operating as a corporation whether you qualify for the various tax exemptions available to nonprofit corporations. This answer will try to outline in general terms the various types of exemptions, but you're going to get tax advantages.

Federal exemptions for nonprofit corporations are set up in specific categories. "The most advantageous category is for 'religious', 'charitable', and 'educational' organizations. Not only is the income of corporations within this category tax exempt, but unlike all the other categories, persons making donations to these corporations may receive tax deductions on their personal income tax. However, corporations in this category have a very important limitation on their activities; they may not participate in any political campaign, lobby for specific legislation, or otherwise engage in active political activity. This is the reason that the IRS has taken away the Sierra Club's tax exemption.

All the other categories allow the tax exemption for the corporation's income but do not allow donors to deduct their contributions. These categories include corporations dedicated to the promotion of business leagues, social clubs, labor and agricultural organizations, credit unions, and farmers' cooperatives. Exemptions from state income taxes usually are modeled after the federal laws. The state laws are similar to the "unrelated business" carried on by the corporation as a subsidiary to its main purposes, for example a college bookstore, is subject to tax on its income. (Whole Earth pays taxes on its store and order operation.)

In California, a few types of nonprofit corporations are also exempt from property taxes. These are religious, charitable, scientific, and some types of higher education institutions. For all of these tax exemptions, the corporation will be required to file detailed informational tax returns showing that the corporation is not violating its exemption. Of course, if the IRS or state agency feel that the corporation has violated its exemption, it will investigate further and if not satisfied will remove the exemption for a period of time until the violation has ended.

### How much of a problem is it to dissolve the corporation?

A corporation remains legally alive unless the formal procedures of dissolution are carried out. Thus if you form a corporation and later it ceases to do any business or carry out any activity, that in itself will not dissolve it. Since the members are considered the owners of the corporation voluntary dissolution can only occur when 50% of the members vote to dissolve. A formal certificate must be filed with the appropriate state agency showing that such a vote has occurred. The Board of directors must then follow a set of procedures spelled out in the laws. This process is called "winding up" and includes terminating business relationships, paying all bills, and dividing up whatever is left over among the members. The corporation then ceases to exist except on a certificate of winding up and dissolution has been filed with the appropriate state and county agencies. Like formation, you will probably have to hire a lawyer to do this work.

There are also several types of procedures for getting a court to dissolve. These are generally termed involuntary dissolution, and are of course expensive since they go through a court. The directors of 1/3 of the corporation may ask the court to dissolve the corporation has not done any business for a year, if there has been serious mismanagement, or if there is a serious deadlock among the directors.

### What alternatives to formation of a nonprofit corporation are there?

The most important alternative form of enterprise is a nonprofit union, which has no legal existence. Thus any debts and other liabilities of the association can be collected from the individual active members of the union. As stated in the previous answers, this may be an advantage. Furthermore, the modern trend of law has been to give associations many of the advantages formally held only by corporations. For example, the associations can sue and be sued in their own name, and can sue and be sued in their own state. The unions are also subject to the same rules as the state tax laws in the same way that a corporation would.

Law Commune  
287 University Ave.  
Palo Alto, Ca. 94301

Ayn Rand says the dollar sign insignia as reserved at by supporting the U and S of the United States. Means US.

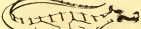
"If there are no complicated tax problems, the attorney should complete incorporation procedures within a month. A ruling from the IRS should take about three weeks more, once the incorporation is completed. The most important factor in determining the length of time everything will take is how quickly your attorney works."

—Charlie

## One Dollar Lawyer

Some of us choose to deal with money. The best book I have found on the subject is *How To Avoid Financial Tangles by Kenneth G. Matzler*. This book is not quite as good as having a lawyer, but then I talk to a lawyer frequently and I learn a lot reading this book. (I have the one volume edition so the following may be a little mixed up.) Volume I is on property, joint ownership, automobile and life insurance, and financial relationships. Volume II is on wills (including directions for making, and witnessing a will, life insurance, and Estate, Inheritance, and Gift Taxes. Volume III is for widows. You can do most of the legal bit yourself with this book, and if you want to see a lawyer, you know and what to talk about. \$1.00 per volume from American Institute for Economic Research, Great Barrington, Mass. 01230. Please note I am not recommending this book on its own merits. The only complaint is that it should be available for \$1.00 total, and these people are always screaming about inflation.

Walter Brock  
Grech, Calif.



Emmit felt his face. He rubbed his cheek with his hand, then both cheeks at once with both hands, and finished smiling. Did you do that? he asked.

Yap.

Are you the one in charge here?

D.R. said he was.

Can I dream away the sky?

You can dream away the sky and fill the gap with blossoms. Emmitt. You can do anything you feel of mind to do, old friend.

I'd dream the sky away and think about the honey-pod and fritter-rose, Emmitt said. That's a land, you know.

I might dream along with you after while, said D.R. I'm pretty sleepy.

Don't go to sleep, said Emmitt. That'd violate the other custom.

What custom is that, Emmitt?

A trustworthy man on guard! said Emmitt, and for the first time since they'd been there, he laughed.

D.R. tried to tell Estella about it, the shava, and Emmitt's face, so much like his father's. But that was too particular, too precise a thing for him to have enough words for. What he did have words for was an image of how it felt to be there in that hospital like he was. He said, one of the men in Emmitt's ward has been there four months now, and another almost the same, and I know that at some day and a half can't seem like a very long time. But it's some day of infinity for me. I haven't slept at all except little naps in the night, and once last night I awoke on hour long yawn in my arm. It's very informal at night. It's a small place, and nobody ever comes on heavy music. You can stretch out where ever you can at night and nobody seems to mind. I have the keenest sense of this place as it is across city and country, and I know that the people in it are perpetually stoned on the activity of the city, which is suffering, and coping with suffering. Some of the suffering is birth and some of it is death, and and as different points in between. After a day and a half here, round the clock, I feel as if we'll all be here all our lives, together, and if we're all warm and comfortable inside this strange cloak. It's like I'm wearing this hospital, as if its atoms were its and its routine, night and day and night, people coming and going, the change of shifts, the long passing of the night and then the day, is all some kind of magnificent garment I've put on. And Emmitt is in it with me. We're all in it, doctors, patients, nurses, visitors, secretaries, everybody, and I feel as if we all like being here in one another's company, collectively

\* Except for tax questions, which concern the federal government, each state has its own laws regarding corporations. These answers are based on California law, but at least in regard to general questions, the reader can assume that his state has similar or analogous laws.





# ECONOMICS

Nineteenth Century Token Coinage  
W.J. Davis  
1969; Seabury, L. London

## A Tool for Experimental Economics

In Las Vegas and Reno, tokens (called "tokens") are the money of the casinos. On the tables and the slots they work like dollars. Turn your cash into pretty bits of plastic, and easily swap your plastic. With the forthcoming return of "silver dollars" (like dollars this summer), the token traffic may subside a little.

In Nevada, tokens aid irrational behavior. At a mental hospital in Illinois, tokens have proved to be a powerful incentive to sanity. By putting the patients of one ward (a picked set of "incurable" or "incurable" ladies) on a token economy, the experimenters found they simply solved 2 basic problems of treatment—how to reinforce forward sane behavior, and how to encourage real transaction between a sick patient and the real world. The patients were paid for small items of self-care (grooming, bedmaking, etc.), for chores on the ward (filling the coffee urn, setting table, assisting nurse, etc.), and for off-ward work (cooking, clerical, laboratory, etc.). With their tokens they could buy privacy (personal cabinet, screen, rear preferred room, personal chair, etc.), goodies from the commissary, leave from the ward, exclusive use of the TV, etc.

**The Token Economy**  
A Motivational System for Therapy and Rehabilitation  
Teodoro Ayllon, Nathan Azrin  
1969, 288 pp.  
\$4.95  
from:  
Appleton-Century-Crofts  
140 Park Ave. South  
New York, NY 10016  
or WHOLE EARTH CATALOG

It is a dry technical book but sensational if you're interested in miracle cures, social cybernetics, whole-system education, or experimental economics. It is like the X-ray of social behavior. The crazy ladies—and all of us, once you notice—are seen to swerve their behavior enormously with minor easily made shifts in assigned values and transactional opportunities in the ward. Yet much of what goes on is determined by derived value, by what the ladies really want. They gain a power in their formerly powerless environment. I'm grateful to Jay Baldwin for telling me of this book.

If a school or a community goes onto a token economy, they suddenly become much more of a single entity, more interrelated, and more distinct from the rest of the world. The closeness has little to do with space. One of the qualities of money is the way it spans distance and time.

Companies used to pay workers in tokens that were only good at the company store. The company profited twice. That system inside out might be a community co-op which sold at cost only to token holders, that is to sustainers of the community.

Reportedly, schools that have gone in for formulation games have had considerable success with economic games involving token money. They gradually expand from one class to incorporate the whole school and eventually the kids' homes.

I know of no examples of tokens being used for economic experimentation. But how quickly you could establish a sub-economy, directly related to the big economy, yet differently structured. It would be completely measurable, and therefore precisely adjustable. You could know exactly the relation of your mutual economic system to the normal, and gauge your wholeness and independence, or balance and success.

As for legality, the only regulations I've been able to find are: your coins can't resemble US currency (that's a federal law), and they can't have a dollar and cent value indicated on them. There may be other regulations.

One good source I know of for beautiful money is Remson Wood of Ridewater, Maryland. He makes diffraction gratings with whatever imprint you want. Rainbow money, cheap.

Subway tokens. Subculture tokens.

A state mental hospital is a severe testing ground for any theory of human behavior. Almost every conceivable behavioral difficulty can be seen there, often in its extreme form. For example, neurological disorders, adjustment problems, employment problems, social difficulties, addiction, alcoholism, general disorientation, intellectual retardation, and neuroticism converge in one community. To gaze upon this multiplicity of disorders and problems is to be overwhelmed by a sense of helplessness and helplessness. Any simple answer that one might consider for the problems of one patient seems irrelevant for other patients. Theories of human behavior which have been so relevant in treating neurotics, such as psychoanalysis and non-directive therapy, founder when encountering the institutionalized psychotic. It seems that every type of explanation has already been proposed, applied, and found wanting in its general application, including psychotherapy, group dynamics, recreation therapy, vocational therapy, drug therapy, etc. One feels compelled to do something anything to assist this forsaken segment of humanity. One might feel that if only the individual could be made to talk out his problems, then some cure might be achieved. Yet, a large segment of the patients will not listen, much less respond, to any conversation. How can one achieve therapy by having the patient reach an insight into the meaning of his hallucination when there is not even sufficient motivation for him to listen to the therapist? How can a vocational therapist get a patient loose from his psychosis by interesting him in learning a vocational skill when it is not even possible to interest the patient in eating to stay alive? Where does one begin in imparting a sense of personal identity and worth to a patient that has been incontinent for 10 years?

Psychologists and psychiatrists alike have fled from this graveyard of human beings, leaving only a small but extremely dedicated group of psychologists and psychiatrists to deal with these problems. The ratio of patients to psychologists or psychiatrists in a mental hospital, where the need is greatest, is often in the order of 1000 to 1.

...The large mental hospital is a testing ground for psychological practice as well as theories. Any general procedure that is found to be effective with the great range of cases encountered in the hospital will probably find great applicability in many different disciplines concerned with human behavior. A method of controlling the aggressive outbursts of the destructively violent patients has great value for the control of criminal behavior outside the hospital. Similarly, a procedure that could motivate a negative psychotic who has been hospitalized for 20 years might be appropriate for motivating a high school dropout to return to his school. A procedure that motivated a withdrawn patient to seek out his many other social contacts, probably have some relevance in building social habits in normal children. A course of action which enabled a congenitally retarded child to functionally interact with his normal peers, might offer a message for developing improved methods of teaching a normal child the multiplication table in a more efficient manner. From this point of view, the mental hospital presents a challenge to psychology to devise totally new psychological and educational procedures in spite of the adversities that such an environment seems to present.

The procedure for adjusting the earnings for each job was in terms of supply and demand. Those jobs for which many patients volunteered were assigned a smaller number of tokens. The jobs for which few patients volunteered were assigned a sufficiently large number of tokens to ensure the selection of the job by at least 2 patients. Periodic examination of the number of individuals who selected each job led to periodic revision of the number of tokens given for it. Other considerations such as the presumed difficulty or the duration of the job were not factors in assigning a given pay. In fact, some jobs that were fairly demanding physically and that required about 3 hours through the day for completion, such as sweeping the hallways, were paid only about 5 tokens since many patients volunteered for those positions. A job that earned a large number of tokens but for which there were few patients who qualified for it was the job of cleaning the latrine. This required only about 10 minutes for completion yet earned 10 tokens. The procedure minimized the dangers of personal idiosyncratic evaluation of what a given job should pay. If a particular job involved certain features that were considered highly desirable for a given individual, the earnings for that job were arbitrarily adjusted upward in order to ensure exposure of the patient to that job.

Prices for each of the reinforcers were based primarily on supply and demand. Some kinds of reinforcers were in especially limited supply, considerations of space. Not all patients could sleep in the same well furnished dormitory room. The opportunity to go by bus to a nearby town was limited by the size of the bus. In order to ensure the full use of all available resources and reinforcers. Some reinforcing features that were considered highly desirable for a given individual, the earnings for that job were arbitrarily adjusted upward in order to ensure exposure of the patient to that job.

...The primary function of the tokens was to bridge the delay between the response and the delivery of the reinforcement. The tokens also provided an objective record of reinforcement delivery and permitted an objective check by the supervising staff as to whether or not the occurrence of the conditioned reinforcement procedure. Also, the attendance of the patient in the token economy was a concrete expression as they would if they were delivering a social or a verbal type of reinforcement. From the patient's point of view, the token provided an unambiguous indication of approval, independent of the attendant's particular mood or whim at the time of delivery. Further, the token procedure limited the need to discover what reinforced the patient when the response occurred. It was necessary only to deliver the tokens and allow the patient complete self-expression of her individual preferences at a later time when the token could be exchanged for a wide variety of different reinforcers. (Fenster, 1961). Most important, the objectivity of the procedure guaranteed that the patient would be reinforced even if minimally motivated to acquire, thereby leveling the attendants and the staff from the need to define what was normal or worthy of being rewarded.

The effectiveness of the reinforcers program was not restricted by any identifiable trait or characteristics of the patients.

**Token (A.S. taceo, a sign, symbol):** (A) token in numismatics is a piece of metal, in size, shape, and type resembling a coin, issued usually as a result of a voluntary or involuntary exchange of value. In the Middle Ages base-metal spurious coins were imported into England from the Continent (see *Spartacus*) and the brass jetons or Nuremberg Tokens (q.v.) were used as small local coins in the neighborhood of a monastery. Owing to the growth of trade in the sixteenth century, considerable inconvenience was experienced in the lack of small change. To remedy this, traders themselves started to strike small tokens as "base metal."

In the time of James I, the Government took things in hand, and issued *Harrington farthings*, as an official token coinage. The British currency was extremely unpopular. They showed a handsome profit to the legislators and no small loss to those who had to use them. During the whole period of the Commonwealth no copper coins were issued. Penny tokens are known, but the usual coins were struck by municipalities, traders, tavern keepers, etc. It is estimated that over 20,000 different types were issued from 1648 to 1672. In Evelyn's *Diary* we read of the tokens issued by a "true-blue" knave, "payable through the streets of London, and for anything better than the next street or two."

Such common inscriptions as *one shilling* or *one penny* or *one farthing* show that they were essentially a poor man's coin. They are usually circular, but square, heart-shaped, lozenge-shaped, and octagonal tokens are known. Penny tokens are known, but the usual coins were halfpennies and (more frequently) farthings. They are usually dated, and give the name and town of the issuer. Often they bear the initials of the issuer and of his wife, sometimes joined by a "true-blue" knot. In 1672 Charles II issued the first regular copper coins, and the making of private tokens was prohibited by proclamation, in August of that year. (Q) *Eighteenth-century Tokens*. Between 1755 and 1769 no real copper coins were struck. Halfpennies and farthings were struck 1770-75, but in no great quantity, and no more copper coins were struck until 1797. In 1787 local issues by private companies and corporations began with the Angles penny and halfpenny (q.v.). About the same period, John Wilkinson struck his well-known "Iron-Master" Tokens, bearing his portrait, and on the reverse, a steam locomotive.

*Eighteenth-century Tokens*. About the middle of the century (Blodet, Prince of Bath, Lady Godolphin, historical (King Alfred, John of Gaunt, Queen Elizabeth I, etc.), contemporary notepapers (Nelson, Earl Howe, William Pitt), literary characters (Shakespeare, Dr. Johnson), politicians (Thomas Hardy, Horace).

On the social side we find banking machines, mail coaches, and ships of all types depicted. Some tokens are in the nature of advertisements (Lackington the Bookseller and the Birmingham Warehouse). Tokens of boots, gloves, umbrellas, firebricks displaying their wares. Some are architectural in type (cathedrals, ships, lighthouses, bridges, canals, towns, castles, etc.). Some are of a more general nature, such as collectible curiosities and souvenirs rather than as currency. For this reason it is easy to find pieces in uncalculated condition. Private tokens were also struck in limited numbers by individuals as numismatic objects, and for gifts to friends. The large issue of royal pennies and twopenny pieces in 1797 brought the series of eighteenth-century tokens to an end.

(U) *Nineteenth-century Tokens*. As the Industrial Revolution swept over the country, so supplies of copper coins, needed to pay the thousands of workers entering the new factories, dwindled, and in 1811 a number of private firms were authorized to issue tokens for the purpose which had been taken into circulation. Silver tokens began to be issued as early as 1804, but most of these are dated 1811 and 1812. They are mostly spangles and shillings, though pieces of higher value were sometimes issued. (See also Bank of England, *History, Countermarks*.)

In the United States large quantities of privately issued tokens were struck during the economic depression of the 1830s (see *United States Tokens*). Several decades later thousands of different kinds of tokens made their appearance during the Civil War because the official coinage was in short supply.

Private tokens were widely used in Canada even after the introduction of official coinage in the nineteenth century (see *Canadian Tokens*).

Coin Dictionary and Guide  
C.C. Chamberlain and Fred Reinfeld  
1960; Sterling, NY

## Two-Factor Theory

There is a colossal void in the arguments and the programs of the country's dominant groups. It is the void that they have now produced no well-formulated economic theories.

Unfortunately and ironically, Lou Kelso, who has some very imaginative economic proposals, has been offering them for many years to the establishment, the dinosaur culture, and the dinosaur elite.

Kelso has long ago perceived the obsolescence of prevailing economic theory that defines labor as the single component of capital that creates money and that money, in turn, creates the structure (i.e., capital), produces wealth in the same way that the human labor does. He calls this insight "two factor" economics or "universal capitalisms" because the emergence of the computer, the microchip technology, and especially the diminishing necessity of human labor, it is an economic theory that is beautifully tailored to the values and beliefs of most CATALOG readers and those seeking alternatives to dinosaur existence.

Kelso's book struggles manfully with practical solutions, including a proposal for a Capital Dividend Income Insurance Corporation and even a proposed Full Production Act of 1939—

These proposals have been laid on presidential candidates, congressmen, newspaper publishers, leading economists, and nearly all key decision makers of the establishment over and over again.

So either Kelso is a lousy salesman or the dinosaurs are convinced their own designs will see them through.

My advice to you is to read Lou Kelso, grow long hair, drop all that establishment conformity, immerse yourself in the new generation, and start to work with a constituency that wants you to change. If you don't come bright young radical economist certainly will."

(Suggested and reviewed by Richard Raymond)

## Two-Factor Theory

The Economics of Reality  
by Richard Kelso and Patricia Healy  
1987; 202 pp.

\$1.65 postpaid or WHOLE EARTH CATALOG

The theory of universal capitalism makes two assumptions about the society: (1) that money is not a value in itself, and (2) that any society seriously caring about freedom must structure its economic institutions so as to widely diffuse economic power while keeping it in the hands of individual citizens. Nor can freedom in an industrial democracy be long maintained unless the economic well-being of the majority is reasonably secure. Never in history has universal suffrage been built on a sound economic foundation; it is this defect, not the ordinary man's inability to cope with freedom, that accounts for the economic ineptitude of democratic institutions.

Secondly, it is assumed that leisure is essential to a civilized definition of efficiency. To generate collectively what every intelligent man achieves individually, namely unnecessary toil for the goods of subsistence and human sense. Today in human society, the only way to get close to advancing totalitarian claims on the whole of life at any time is by the use of money. Money is the only common language. Leisure and the liberal arts tradition are giving way to the totalitarian work state which has no place for wealth other than, only "human resources" and service functions.

As Harold Moulton of the Brookings Institution first pointed out in 1935, new capital is not to be financed exclusively from past savings, but from just as easily and logically be financed from credit, by means that create new capital owners simultaneously with new capital assets. Capital produces wealth. Unlike consumer goods, it is inherently financeable. With vast capital and the same techniques being used today to finance the acquisition of non-income-producing consumer goods can be employed (1) to vastly expand the existing economy—to build a Second Economy—and, (2) to enable noncapital-owning households to buy equity interests in new capital as it is formed, paying for it precisely as the capital owner (with rare exceptions) has always done—but of the income the newly formed capital produces.

Alternative is indeed the crux of the matter, and here it is that money is not a value in itself, and that the principle of moral superiority is easy to maintain from the sidelines, particularly when one's livelihood and education are being provided for by others. The question is whether the sides are in a true circumstance? Will they do any better when their turns come? What is the moral that is youth would not and cannot, given the financial and economic framework the owners of the money and the power? The moral convictions of individuals are important in the long run, it is institutions that determine immediate course of events—particularly the institutions of money.

Not an evil conspiracy, but defective financial institutions and the lack of alternative institutions have delivered us to the door of the total work state. This book has attempted to present the alternatives, founded on the missing logic of an industrial economy.

## Not-Money Money

Your piece on tokens interested me. Contrary to what you indicate, there is nothing new about tokens. They have been used for use as money in the U.S., with a similar provision for paper bills. However, these provisions can be avoided by printing disclaimers like the one on the enclosed certificate. I have used it for years. For Any Purpose, "Not Intended As Current Money". There's no effective way to prove any other intent.

These bills were the result of a weekend spent tinkering with my printer and a Monday morning visit to a local farm price place. The denominations are in decagrams of silver (One Decagram equals ten grams, 654 mg equals one penny, and the price place is in pennies). The decagram is currently worth 50¢ to 60¢. Although silver is subject to considerable short-term price fluctuation, it is intrinsically more stable, and wants to project itself against rapid changes in the price of silver, he can make an appropriate deposit with the Atlantic Commodities Purchasing Service (ATCOPS, P.O. Box 224, Saugerties, NY 12477). This is a "silver bank"

## Money, Money

Your comments about a depression further stimulated my thinking organ. Nearly every financial analyst who they corrected the hell-69-70 market slump and associated phenomena now predicts a major depression, coupled with a runaway inflation and eventual devaluation of our now worthless dollar. Variations on the theme are that an increasingly intense cycle of "regression/inflation" will replace the deflation and depression. I have seen a silver coin best hedge against said deflation is 1. saving an ounce in a Swiss bank. In Swiss francs (more than 80% gold backed, if the dollar is devalued) you will earn much, much more than the 5-6% they now predict. 2. silver coins (for cash use). 3. leveraged silver coins, if you have a bit more to invest, the Pacific Coin Exchange, 3520 Long Beach Blvd., Long Beach, California 90807, will loan you \$1100 on each \$1000 bag of coins and charge you 9% interest. This means you can leverage your own \$1000 up to about \$5000 and risk only the premium (about \$250) and interest. This risk is almost nonexistent—except that it is not at all unthinkable that the US Fed will make ownership of silver illegal as they did gold in 1933. You'd get your money back anyway. It is possible to buy silver, leveraged, through a Swiss bank, Economic Research Counselors, Box 368, San Diego, CA, 92112 as specialists in helping you do this.

If you buy silver coins as a hedge against the deflation (anyone will take a good hard silver coin) it will best to store them in a safe deposit company, NOT IN A BANK. Bank holidays close the whole bank, when silver coins are cashed (for cash use). The gold is in the ground. The lowest prediction for the price of silver (which sold at \$1.78 and ounce at the close of the market the end of July) is \$3.50 by the end of '71. Many makers' make other predictions much higher.

The important thing is that WHEN (NOT IF) the public finally loses all confidence in its politicians and their funny paper money, dime will surge. You must have per 1965 coins or you will get funny copper/nickel tokens called money.

At \$1.80 an ounce your coins are worth 34% more than face value; at \$3.00 an ounce they are worth 121% face value.

If you have a lot of bread, and want a more easily stored and stable piece of wealth you can buy British Sovereigns (pre 1933) from Jones. They will cost you about \$10.50 each or about \$44 an ounce, which is an excellent buy. They will be used as a source of land purchase, etc., or to trade for more respectable silver. Many might think these little anxieties are the mark of old fashioned reactionary nuts; however:

- 1. the government always degrades money
- 2. politicians always lie
- 3. people always accept silver and gold which can be stored and used as a source of land purchase, etc.
- 4. nobody has found a politician integrity test yet.

Silver and gold have become good buys because the US Fed's have given all their away and can no longer depress the market.

George von Hülshstein, himself

PS. Unless your crystal ball really works out of the silver commodity futures market, only about 1% of contracts are delivered on, which means the futures game is a legal way to play traps.

## Money, Money

Gary Miller  
Chattanooga Coin  
910 Market Street  
Chattanooga, Tenn. 37401

It is so far the cheapest interest on silver coins bought on loan (you pay the difference between face value and market value of the silver on dime and quarters) at 7%.

To relate this, silver, for lots of reasons, is becoming dearer and dearer. In the event of a monetary catastrophe or a probable economic debacle in the USA, genuine silver coins and quarters will spend more silver than paper or copper/nickel coins will to get you anything but laughs.

A bag of silver buried on the old homestead is the nicest security blanket.

Mildly speculative investments in silver coins is about a 5% return, in fact, my own personal assets, measured by what our community has with its surplus and where we have our employees retirement funds, is that it is closer to a 99% return.

In short, silver can't be stole, but it can't be changed to say in politicians' promises.

George von Hülshstein, himself  
Orange City, Florida

(current assets about 85,000 decagrams of silver (Decas), or \$44,000 to \$50,000, backed by the personal faith and credit of the owner, who are worth more than \$100,000 in silver, worth more than \$100,000). That is, it takes your dollar, converts them into an equivalent number of Decas (on paper), pays 3% annual interest in Decas, and when you want to withdraw your money, they convert it back to dollars and pay you. Thus you turn 3% plus a profit on the dollar any change in the price of silver, and in any case, you need't worry about any price change of silver screwing you into-vis any outstanding decagram notes you have.

This outfit also sells Decas coins, but, by the time you add sales tax, shipping, and the fact that silver is 92.5% silver, but are priced at the price of 99.9% silver, etc., etc., etc., they are of interest mainly as curios. ATCOPS is a part of Operation Atlantis group that is planning to publish a book by Robert Garbman this fall. They put out a four-page newsletter (theoretically semi-monthly, but often late) at \$4.50 for 24 issues. They have a book for \$4.95, a pamphlet describing their project, and a copy of the *Journal of Operation Atlantis*. All from the address above in Saugerties.

Sincerely yours,  
Erwin S. Strauss  
TRI Enterprises  
Santa Barbara, CA

## People's Capitalism Has A Newsletter

We carried Kelso's Two Factor Theory ("How to Turn 80 Million Workers into Capitalists on Borrowed Money") in the Spring CATALOG with a review by Richard Raymond, which suggested that Kelso's ideas were a valuable addition to the literature. The review was widely quoted in other publications, including one in England.

Kelso's success is gathering some Movement qualities, including now a

Newsletter of the Institute for the Study of Economic  
2027 Massachusetts Ave. N.W.  
Washington, D.C. 20036

Membership \$10 Year  
Student membership \$6/Year  
Below is an article from Vol. 1, No. 1, October 1970

## TRIBUNES OF THE MARCH

Tribunes are mobilizing to the defense of the people in the Nation's capital!

A group of Kentonians here calling themselves the "Ninety-five Percenters" has begun an ambitious campaign to force Congress to achieve the goals of Universal Capitalism as outlined in The Capitalist Manifesto by Kelso and Adler. Rejecting all forms of concentrated ownership—whether in the form of class capitalism, mixed capitalism, or state capitalism—as the inevitable result of defective economic systems, the Ninety-five Percenters will appeal to the capitalist masters, and to potential allies among the five percent who enjoy exclusive access to capital ownership today.

Starting from a nucleus of a Washington Area Free University class, this "new movement" has organized into bands of three people called "tribunes." With "Economic Power to the People" as its rallying cry, the group will take steps to construct history's first democratic economic foundation for a free industrial society. It will strive to connect corporate economic power directly to every person in society through the creation of a new form of ownership and the abolition of private property, an institution that has eroded and become discredited and abused as access to capital ownership was denied to the vast majority of people.

The groups chose the name "Tribunes" for its original meaning, "one who takes steps to construct history's first democratic economic foundation for a free industrial society. It will strive to connect corporate economic power directly to every person in society through the creation of a new form of ownership and the abolition of private property, an institution that has eroded and become discredited and abused as access to capital ownership was denied to the vast majority of people. The groups chose the name "Tribunes" for its original meaning, "one who takes steps to construct history's first democratic economic foundation for a free industrial society. It will strive to connect corporate economic power directly to every person in society through the creation of a new form of ownership and the abolition of private property, an institution that has eroded and become discredited and abused as access to capital ownership was denied to the vast majority of people.

1. Everyone should have equal opportunity to participate in production through both labor and ownership of capital. (The input or participation principle.)

2. Everyone is entitled to the rewards of his production. (The "private property" principle of distribution.)

3. No one should produce radically more than he can consume, if this would deny others the right to participate in production. (The anti-monopoly principle of limitation.)

Each of the three members of a Tribune assumes the personal responsibility for forming another Tribune, to which he is an observer or communications purposes. As their numbers increase throughout the United States, the Tribunes will be organized along regional lines to conform with the Federal Reserve and Congressional districts. Each Tribune in the network will develop its own action and educational programs, guided by the spirit of the First Amendment and based on common sense.

Separate and distinct from the Institute for the Study of Economic Systems, the Tribunes are political and social movement oriented. Their aim is to develop the Ninety-five Percenters' philosophy and programs of Universal Capitalism.

The Tribunes will bring together the expertise of individuals from varied professions and fields of interest. Regular meetings will effect a continuing exchange of information and ideas and result in practical planning for effective action.

For information about joining your own Tribune, write to:

Rev. William Gardner  
Southern Baptist Convention  
16th and Harvard Streets, NW  
Washington, DC 20009

My job is to get liquids into Emmet, and then help him get them out and swallow. His teeth are sore from the breathing now, since they've popped him up, his senses as well, that he can't even handle as much as a spoonful of water at a time. So what I do is I take a small amount of liquid, and I put it in a small cup, and I let my finger, hold the straw to his lips, then take away my finger to let it run into his mouth and down his throat. About once a minute I do that, take the water into the straw, hold it to his mouth, then let it go into his mouth. It's the fastest means by which a nipple manages less than a glass full an hour, but still does it up because his kidneys continue to function, and Doctor Robert says that's the way to any chance that Emmet has, which isn't very much of a chance no matter what we do. But it doesn't matter. I just keep dipping it up and dropping it into his mouth, strawful after strawful, and then a little while later he'll come, if he'll be water-time.

And when I yell out water-dime! water-dime! and I'll tug him to a sitting position and help him kick it out, then lay him down again and go on dipping in and letting out.

How many times, . . .

No one knew, . . .

That was one statistic no one kept, . . .

The thousands, surely, Maybe millions, . . .

Maybe billions, O.R. thought. Maybe this has been going on for years and years. If you don't count the times, how can you know how long it's been going on? How can you know for sure? The stars.



## Capitalism & Freedom

### A New Radical's Guide to Economic Reality

*Government-managed, or laissez-faire. Both ends are right theoretically, wrong practically, and the middle where we live is no prize either. I personally lean with these two toward the Let It Be end of things, but I got nothing more than glances to back my arguments, which are the economics of a clock biologist: evolution is continuity plus unfettered mistakes.*

*Milton Friedman, distinguished Chicago-school economist, and Angus Black, hairy power-to-the-people, both find government management of the economy consistently unjust, unfreeing, and usually in the dark about what's going on. They have some proposals; specific, radical ones.*

## Capitalism & Freedom

Milton Friedman

Angus Black

1982, 222 pp.

\$1.50 postpaid

from:

Chicago City Press

5801 Ellis Ave.

Liberty, Ill. 60637

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## A New Radical's Guide to Economic Reality

Angus Black

1971; 114

\$2.45 postpaid

from:

Holt, Rinehart & Winston, Inc.

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New York, N.Y. 10017

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## If you want something for nothing, go jerk off.

Bob Weir 1970

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## Radical Software

We get letters—saying how encouraging, enspiriting, possibility-expanding the Whole Earth Catalog is—embarassing amount of gratitude in these letters. Well, it's now I feel about Radical Software: A double handful of fast young heads have entered do-it-yourself TV and gotten acquainted with each other, and now started a tabloid of mutual read-out, aiding each other's scuffle for equipment, audience, comprehension, concepts, values. They sense power (95% of U.S. homes have TV) and unexplored territory (broadcast TV still scarcely seems to know what it is) and the hard cider of dwelling on evolution's imploding edge (maybe, [always maybe,]) In a way it's about time: we have had radio, head records, head books, magazines, newspapers, head movies; very little head TV. (Beware beware of controlling all your inputs lest you become your own caricature.) These are TV heads, getting restless, with a fine access publication. I hope it stays solvent and publishing. High content goods.

—SB

### Radical Software

\$1.50 issue (quarterly)

from:  
Reinhardt Corporation  
8 East 12th Street  
New York, New York 10003

"Water systems engineers must build city water supply systems to accommodate the drop in water pressure occasioned by the toilet-flushing during television commercials."

Vic and I recorded a conversation between us using full body shots on a split screen. We were seated facing each other. A week later we played the tape back using slow motion and no sound. It was extraordinary. Holding my head and rocking back and forth in imitation of Vic. "Yeah, I'm listening to what you're saying, Ryan, but I'm really getting ready to strike back." Following a diminutive hand gesture "Let me make it small and small, Ryan, so that you can understand it." Vic was scoring on me a similar way and we were laughing our heads off. What was even more extraordinary was when I woke up the next morning, I felt like I was wearing his body. That I had it on. I called up Vic and started telling him how I felt about the relation between his/my stomach and shoulders, stomach and head, torso and legs, etc. etc. Each time Vic confirmed I was right on. For the next few weeks I found I could recall this sense of his body when I wanted.

## The Techniques of Television Production

I'm coming to believe that good how-to writing mostly depends on good diagramming. Millerson has mastered that, so you're inclined to believe that he knows his television. Certainly he covers the ground in a thorough fashion: studio layout, TV picture and camera, TV lighting sound, film reproduction, sets, make-up, organization, imagery, camera control, editing, sound composition, production method, titling, effects, and color. The book can make a more critical viewer of you. Or it can give you some skill to go with the power when you demand and get some control of the half-hour educational program about your scene.

—SB

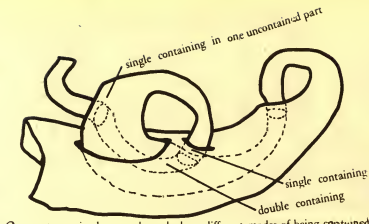


The Technique of Television Production  
Gerald Millerson  
1961, 1968, 440 pp.

\$7.50 postpaid from:

Communication Arts Books  
Hastings House, Publishers, Inc.  
10 East 40th Street  
New York, N.Y. 10016

or WHOLE EARTH CATALOG



Relative to video infolding it is near impossible to describe in words even using Klein worm graphs what I'm talking about. The following will mean little to anyone except those who have had some experience of taping with themselves at different levels.

Taping something new with yourself is a part uncontained To replay the tape for yourself is to contain it in your perceptual system

Taping yourself playing with the replay is to contain both on a new tape

To replay for oneself tape of self with tape of self is to contain that process in a new dimension

Parts left out of that process are parts uncontained

All of this is mappable on computer graphic terminals.

At one level that of reality that is left off the tape is the part uncontained

Raw tape replayed is part contained in the head

If it is somebody else's tape you are watching you can to an extent share in this live perceptual system via the tape ha hook.

To watch another's edited tape is to share in the way he thinks about the relation between his various perceptions in a real time mode. This enters the realm of his intention.

If you are editing some of your tape along with tape somebody else shot and he is doing the same thing using some of your tape then it is possible to see how one's perceptions relate to another's intentions and vice versa.

Design Intelligence: The Alai has two major differences which set it apart from the other Porta-Paks. One, it uses quarter-inch tape. All the others use half-inch.

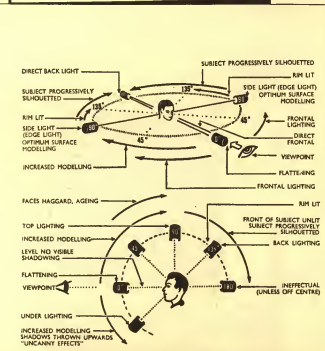
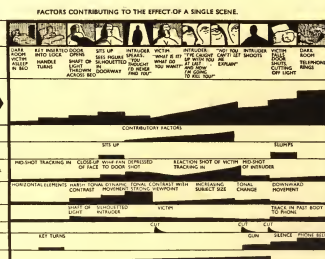
The advantage of quarter-inch videotape is that it's fabulously cheap compared to other standards. Quarter-inch is the same size as audio tape (for reel-to-reel machines) and lists for \$7.95 for twenty minutes as compared to \$14.95 for twenty minutes of Sony videotape. The disadvantage of quarter-inch is that it has less information storage capacity as reflected in the 200 lines resolutions of the system, the lowest of any.

The other unique feature of the Alai is that it has a small detachable monitor which clips onto the recording deck. The camera itself has an optical viewfinder which means reduced weight.

Overall this means that Alai is the first system not to place a tiny TV screen between your eye and the lens in imitation of a film camera.

GUNS, KNIVES OR VIDEOTAPE\* works this way. Two people, each with a portable pack and camera, face off fifteen feet apart. At a given signal they start "shooting" each other. Both roll tape continuously for five minutes. Then both tapes are played back simultaneously on two monitors set up side by side. The area should be large enough so that participants can move around. Variations are possible. Doubling up in teams of two, doing it in a mirroring room, setting up a third camera on a stationary tripod to catch the whole duration of playback with the participant's tapes.

\*executed in Pontiac, Michigan



D.R. was outside now, breathing end looking at the stars. When Leonard was there in the afternoon D.R. a half-pint whiskey bottle with three drinks in it, and about midnight he stepped outside and dozed them, one, two, three, and then stood around a while, looking up and breathing. Emmitt had fallen into one of his sleeps about midnight, and the hospital was quieting, quieting down. The lobby was half-lit and silent except for Mrs. Hubbard shuffling papers behind the admissions desk. Dear Mrs. Hubbard. This was their second night together. It was like some kind of combat tour they'd been on, and it had drawn them close, her and D.R. He's very nice, she thought. She hadn't paid much attention to the night before, but tonight she thought: he seems like a very nice young man, taking care of his old uncle like that. Not many people take that kind of care of dying old folks. Most just dump them on the hospital to live or die and here's one sure to die, and soon, and yet that young man is caring for him as if it was his own life at stake. The first night she hadn't offered him any coffee from her electric coffee pot, but tonight she did, a couple of times because tonight they're both into it together, staying up, awake, on the graveyard shift. D.R. drank two cups of Mrs. Hubbard's coffee, and then later went outside and sipped the whiskey Leonard brought him, and as he looked up at the stars, and smelled the cool dust in the air and listened to the trains clanging across the river in the yards, he thought about how kind all the people were. Leonard, Mrs. Hubbard, Doctor Robinetta. This big clock, he thought. This marvelous garment. As he walked back inside he picked up a corner of the garment and settled it about Mrs. Hubbard's shoulders and she smiled at him and said there'd be more coffee later on.

At nine thirty the next morning D.R. called Marcella from the drug store on Main Street. Marcella said it's bad news aint it. I'm afraid so, said D.R.

He could hear Marcella crying, not much, a sudden flash of tears, then sniffs. She could talk okay. She said how long has he been gone, David?

Just a few minutes. He died about ten after nine.



The following are suggestions and reviews by the Media Access group at Portola Institute, 1115 Merrill St., Menlo Park, CA 94025.

## Sony

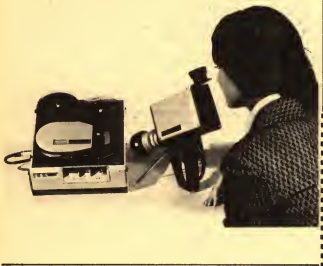
Video is not cheap film, or a new gadget for TV "professionals." It's an information-processing tool with a built-in capacity for feedback, in all forms. Which opens up entirely new arenas of cybernetic work, and play.

Sony may not be the best 1/2" portable system around—don't hesitate to look into Panasonic, Shideban, others, or wait for Ampex coming in the fall—but it's the most available, and most people into video use it. The electronics are dependable, and the source of its magic, but you can count on exasperating mechanical flaws. Such as: short-life batteries, tape snagging during recording, handles or straps breaking, tape drop-out (with every brand). Editing presents problems here, too, if you're a perfectionist. A good engineer friend is a god-send.

—Allen Rucker

Sony Corporation of America/VTB Division  
4747 Van Dam Street  
Long Island City, New York 11101

Sony AV-3400/AVC-3400	
Portable Recorder/Camera	\$1495.00
Sony AV-3600	
Recorder/Playback Deck	\$ 695.00
Sony AV-3650	
8W Editing Deck	\$ 995.00



## Cable Television

A Community Antenna or Cable Television system (CATV) consists of:

1. super antenna to pick up broadcast signals,
2. a "head" or "headend" which processes these signals and can serve to process locally originated signals,
3. coaxial cable which is strung via telephone poles or city ducts to home TV sets.

As many as 40 (soon to be 80) channels can link your tube with all sorts of information-entertainment systems—the street, libraries, a tape bank of almost anything. New systems may adopt two-way capabilities permitting individual feedback into the system. (Big brother possibilities loom large as files of individual uses are stored on central computers.)

Half-inch video is cable-castable and systems with more than 3500 subscribers are now required by the FCC to program a "significant" amount of locally originated material.

Everyone can be a source of local life data affecting a media inversion that may clear the air.

—Richard Kletter

## Selected References:

- Johnson, Nicholas. *How to Talk Back to Your TV Set*. (Atlantic-Little, Brown, & Co., Boston, 1980). Also in paperback.
- Price, Monroe E. *Content on Cable: The Nascent Experience*. A report prepared for the Sloan Commission on Cable Communications, Sept. 1970. Writer: 105 Madison Ave., New York 10016.
- Smith, Ralph Lee. "The Wired Nation." in *The Nation*, May 18, 1970. Writer: The Nation, 333 6th Avenue, New York 10014 (354 or 10 for \$3).
- Tewlow, Jules S. "Cable TV in Perspective." *American Newspaper Publisher's Assoc. Research Institute Bulletin* No. 1029, Sept. 26, 1970. Writer: P.O. 598, Easton, Pa. 18042.



## Challenge for Change Newsletter

The Challenge for Change program (and its French-speaking equivalent, Societe Nouvelle) conducts forceful media access projects in film, video, and CATV with disenfranchised Canadian groups. With no cybernetic shock, these people are real pioneers in the information environment. Their newsletter documents their approach to decentralizing media control, and is itself a vehicle for social change.

—Allen Rucker

National Film Board of Canada  
P.O. Box 6100  
Montreal 101, Quebec  
No charge indicated

## evaluation

In March we taped a meeting of the film-TV sub-committee evaluating the use of the video equipment. The following are quoted from that discussion:

## effects on the individual

"We were not very interested in ourselves when we started."

"But it helped me a lot to know myself. You see how you function."

"It helped me gain more confidence in myself. It's important to know who you are."

"It develops your critical senses. You become two people — he who acts, and he who watches himself act."

## Graphic Terminal

Enclosed is information (circled) for a review of Tektronix. The Tek 7000 series will be the popular 'scope for the predictable future (i.e. on the order of 10 years); 'scope users would be years ahead to learn the new 7000 series rather than the 500 series. Graphic input-output remote computer terminals (as in "2001") are the way to trip, yes? They beat teletypes and CalComp mechanical curve plotters (or plotters) for speed and interaction. Graphic terminals are currently the best (tho little used) computer-human interface for scientific/engineering (i.e. accounting) problems, and graphics should replace catalogs, sales personnel, trips to the store, & maybe option-designers in the 1970's, or a home tool. Tek's T-4002 and other graphic terminals using Tek's storage CRT (TV screen), are far cheaper means of displaying large quantities (3000) of alphanumeric characters or high-resolution drawings, than the common conventional CRT plus magnetic core or other storage unit.

Tektronix seems a nice environment for electronics engineers (incl. lots of freedom & informality (work when the mood strikes, 24 hr. access to buildings, no suit (for tie) image), active in education of employees & community (gifts & heavy discounts to schools), as well as the usual excessive pay and excessive equipment to play with. The universities which I know irradiate the community with free/cheap information (software), whereas they should be distributing tools/games/toys/hardware (photo film computer everything that must be actively used, not passively satist, to everyone who enjoys playing with tools).

Larry Griest  
Grestek, Ore.



Tektronix Catalog  
1971; 432 pp.

from:  
Tektronix, Inc.  
P.O. Box 500  
Beaverton, Ore. 97006

## Video Cassettes

Home video playback/record systems will soon extend a visual data bank to your personal control. Create your own television with portable recorders or watch when and where you will by simply plugging in the cartridge.

You'll get hit for an uncomfortable amount of money—looks like about \$400—the playback deck alone and at least \$10 for cassettes at the beginning—but it is hoped that the content will be worth it.

Color flashes and other psychodelevision, organic video magazines and esoteric films will be coming at you—perhaps over giant wall screens. But it's all at least three years away from the home market. The early technical battles, fought by a plethora of giant corporations, will be waged in industrial and educational applications. Technical standards, distribution and maintenance support systems should be further along by the time the hardware gets to us.

—Richard Kletter



"The people we interviewed on the street — I really felt they wanted to get a message across. They wanted other people to hear about their problems, to share them. People feel pretty isolated."

"I think the people hoped their message would reach the powers-that-be. They had never had the chance, before."

"When we watch the tapes, we don't just learn to know ourselves better, we also come to understand others better. After that, it's much more fun to work together."

## Video 1000

A dense monolith of fruits of tips about TV state-of-the-art and the future. Aimed mainly at TV advertisers, but of use to any media cowboys. Swap them into they can use for a subscription.

—SB

## Video 1000

Robert DeHavilland, ed.  
54 Park Ave.  
New York, N.Y. 10016

Now seeking information about corporate activity not in the public interest: the new Clearinghouse for Professional Responsibility (Box 486, Washington, D.C.) will not register. It is aware that the organization could develop into something big—if the Clearinghouse idea appeals to many UNEMPLOYED professionals with a newly stimulated social conscience. Such as engineers and advertising men.

The revolution is starting: First US catalogue of videocassette programs—600 titles, about 50% in color—is now available. From CBS Electronic Video Recording Div. (For a copy, write Norman Ober at CBS EVR, 51 W. 52 St., NYC 10013).

2wvcc video TV is being tested in New York— with 10 subscribers of Manhattan Cable television. (Part of the test) viewers were asked to indicate their choice of vacation trip after watching a commercial for Eastern Airlines.) In 6 to 9 months: 600 subscribers may have new converters with special buttons to signal their "votes".

Pornography on Japanese TV. It's happening. But not officially. Transmission from closed-circuit systems of some Japanese firms— which show porno films and tapes— are now being picked up by home TV sets in the Kansai region.

This year in Japan (next year in the U.S.): a color TV camera for about \$1000. Next: perhaps \$500. Sony's marketing plan for its 1 1/4" "Trinitron" now under development. A "professional" version, reportedly suitable available for broadcast television, may be introduced in about \$3000.

Video writ— by Annette & Lesley. New, fact-packed newsletter about cartridge television: CTY News Digest. Published by Billboard Publications, 166 West 46 St., New York, N.Y. 10036. One of the best bargains in the business. For a sample copy, write Stephen Trainor, Editor.

Fast way to add video to the beat of a sound track. Transfer the track to videotape via equipment that lays down a "frame count." Feed the audio to an oscilloscope to get a visual indication of the audio. Find location of the beat on the tape, note the frame count. . . For more information, ask for the report, "Instant Replay No. 4" from National Teleproductions, 5261 North Tacoma Avenue, Indianapolis, Indiana 46220. (One NTP job: 32 seconds in 10 seconds of tape.)

## Towards a Poor Theatre

The strongest work in theater lately is Jerzy Grotowski's. This is his book. Social yoga, with balls.

—SB  
(Suggested by Robert Frank)

**Towards a Poor Theatre**  
Jerzy Grotowski  
1968, 262 pp.

**\$2.45** postpaid

from:  
Simon & Schuster, Inc.  
630 Fifth Avenue  
New York, N.Y. 10020

or WHOLE EARTH CATALOG

If the actor, by setting himself a challenge publicly challenges others, and through excess, profanation and outrageous sacrifice reveals himself by casting off his everyday mask, he makes it possible for the spectator to undertake a similar process of self-penetration. If he does not exhibit his body, but annihilates it, he burns it, frees it from every resistance to any psychic impulse, then he does not sell his body but sacrifices it. He repeats the atonement; he is close to holiness. If such acting is not to be something transient and fortuitous, a phenomenon which cannot be foreseen in time or space: if we want a theatre group whose daily bread is this kind of work—then we must follow a special method of research and training.

When I take sides against half-heartedness, mediocrity and the easily come-easy-go attitude which gives everything for granted, it is simply because we must create things which are firmly oriented towards either light or darkness. But we must remember that around that which is luminous within us, there exists a shroud of darkness which we can penetrate but not annihilate.

Contact is one of the most essential things. Often when an actor speaks of contact, or thinks of contact, he believes that it means to gaze fixedly. But this is not contact. It is only a position, a situation. Contact is not staring, it is to see. Now I am in contact with you, I see which of you is against me. I see a person who is indifferent, another who listens with some interest and someone who smiles. All this changes my actions; it is contact, and it forces me to change my way of acting.

## Scenery for the Theatre

me and carl were stage carpenters once upon a time

and we built a good part

of what's in this book:

flats, traps, platforms, risers,

doorways, windows, parallels,

bartables, machineguns, crossbows...

the standard procedures, tools, and tricks for the grand illusion are here. maybe someone can use this book, and a little soul and breathe some life back into the theatre. bring it out into the streets.

—jd

## Scenery for the Theatre

Burris-Meyer and Cole  
1938, 66, 473p.

**\$32.50** postpaid

from:  
Little, Brown and Company  
200 West Street  
Waltham, Massachusetts 02154

or WHOLE EARTH CATALOG



*Characteristics of the Craft.* Scene construction is chiefly a specialized type of journey. The materials and technique of the woodworker are adapted and other techniques and materials introduced for the manufacture of structures which differ from the ordinary product of the carpentry shop, cabinet shop, or woodworking mill. The nature and use of scenery impose requirements which make scene construction a craft by itself with which the ordinary carpenter or cabinet maker is unfamiliar.

Scene carpentry differs from other forms of carpentry and cabinetwork. In several respects: 1. The objects built must be demountable and portable, and yet when assembled they must show no evidence of joining. 2. Scenery is built for use during a short period of time, as compared with furniture, dwellings, etc. 3. Scenery presents only one finished side or face to the audience. 4. Scenery is never seen or examined at close range.

Scenery which has to be demountable and portable must be built in pieces which fit neatly together and which are strong enough to withstand intermittent and often rough handling. The frames must hold their shapes rigidly so that the fit is assured each time they are assembled. There can be no cutting to fit when the scenery reaches the stage. Each piece must be constructed exactly to size and shape as planned. Rebuilding of scenery, when it reaches the stage, is costly.

The fact that scenery is used for a shorter period of time than other carpentered objects allows the use of lumber of smaller cross section than is generally used in weight-bearing structures, since deterioration and constant use do not enter into the determination of the safety factors. For the same reason and for reasons of workability, softwoods are used in scene carpentry, where hardwoods would be used in ordinary carpentry and cabinetwork.



Argopelia Masks created solely by the facial muscles (Ezgmunt Molk, Zbigniew Opiata, Rens Mircea). Photo: Teat-Laboratorium.



The costumes are bags full of holes covering naked bodies. The holes are lined with material which suggests torn flesh: through the holes one looks directly into a torn body. Heavy wooden shoes for the feet; for the heads, anonymous beards. This is a poetic version of the camp uniform. Through their similarity the costumes rob men of their personality, erase the distinctive signs which indicate sex, age, and social class. The actors become completely identical beings. They are not being tortured bodies.

The inmates are the protagonists and, in the name of a higher, unwritten law, they are their own torturers. The merciless conditions of the extermination camp constitute the milieu of their lives. Their work crushes them with its size and its utility, mythical signals are given by the guards; the inmates call out in screams. But the struggle for the right to vegetate and to love goes on at its everyday pace. At each command the human wrecks, barely alive, stand up erect like well-disciplined soldiers. The throbbing rhythm of the play underscores the building of the new civilization; the work expresses the inmate's stubborn will to live, which is constantly reaffirmed in every one of their actions.

## Stage Make Up

In San Francisco in the days when everyone was painting their faces, it was strictly fags: My face is gobs of color, let's ball. Except for Page Browning. Page was a Merry Prankster who wound up doing time in jail with Keese. His particular outward talent, besides dope, was his face. In the Boyscouts he'd learned the rudiments of makeup/ var paint, and that skill blossomed into Page at the Acid Tests. A black and white streamlined living skull wearing a cape. A red and blue face, one side red, the other blue. A face of flames.

I wish this book had been around then. Somebody would have got one for Page and let him go for the next higher level. He could have come as Keese, as President Johnson, as an infant, as himself enlightened.

—SB

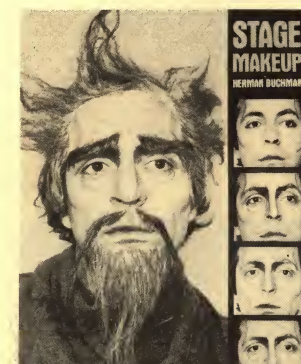
## Stage Makeup

Herman Buchman  
1971, 192 pp. 100 color plates

**\$15.00** postpaid

from:  
Watson-Guptil Publications, Inc.  
165 W. 46th St.  
New York, N.Y. 10036

or WHOLE EARTH CATALOG



FOREWORD BY SIR BALTHAZAR RICHARDSON

## Makeup bases

The makeup base is a cosmetic that creates the desired skin color. There are many kinds of bases manufactured in a variety of consistencies: hard grease sticks, soft grease paint, liquid, and pancake. In this book, you will be using practically all of them.

**Hard grease paints** These are available in a complete range of colors. These paints come in stick form and are approximately 8" long and about 1" thick. Although this base requires a lot more effort to apply, when done properly it has the best and longest wearing quality of any of the others.

**Soft grease paints** These are available in a complete range of colors for use as makeup base. Manufactured in a toothpaste type tube, soft grease paint has a creamy texture and is quickly and easily graded. Soft grease paint tends to shine excessively because of its cream content and, moreover, does not survive body heat as well as the hard grease paint.

**Pancakes** These are also available in a complete range of base colors. This paint is supplied in a compressed form in a flat round container, and is applied to the face with a moistened sponge. Pancakes dry quickly and have a matte finish and, therefore, form a difficult surface for further detailed makeup work. This is the best for theatrical use because it dissolves under heat and perspiration. It is much more practical for film work because it can be repaired continuously.

**Liquid base colors** These are available in bottles and used primarily as a body— as opposed to face— base. Liquid base dries quickly, which makes it impractical for use as a facial base.



Well, honey, you've done a wonderful thing, being there with him, I know you have. And me and Doy'll be the kids if it be on down tomorrow. When do you think

I figure about two in the afternoon, Marcella. Might as well. There were about twenty people to come, and we might as well get it done.

Well, honey, listen, said Marcella. What we'll do is leave her real early in the morning, and be there about one. Does that sound okay?

That sounds fine, said D.R. I'll take care of whatever arrangements. And Leonard'll help me.

Marcella told D.R. she thought he was wonderful. They hung up then, and D.R. went to Olney's Funeral Home to buy a casket.

That happened fast too.



## Expanded Cinema

We're moving out of a universe made up mostly of physical objects and emerging into one formed of a flux of energy, electromagnetic waves and invisible changes and communications. All the world's television and radio broadcasts are constantly moving through our unaware heads, along with a lot of things we've not yet tuned in to. This book is about this new universe and about learning how to live in and participate in its changing patterns.

(Reviewed by Tom Bender)

Expanded Cinema  
Geta Youngblood  
1970; 432 pp.

\$4.95 postpaid

from:  
E. P. Dutton, Inc.  
201 Park Avenue South  
New York, New York 10003  
or WHOLE EARTH CATALOG



## Theatre House

Lovely junky stage stuff. Reminds me of Frankster trips to Serbin's in SF to stock up on fringe, de-glo fashions, costume jewelry, face paint, tigerskin fabric, and the two trouperette spotlights that made the Acid Test Graduation work.

—SB

Theatre House Inc.  
115 Sixth Ave.  
Dayton, Kentucky 41074



No. 639 - 3" CHALETTE FRINGE—50¢ yd.  
Rayon - Colors: Red, Gold, Kelly Green,  
Light Blue, Royal Blue, Peacock Blue,  
Aqua, Light Pink, Candy Pink, Orange,  
Fluores, Lavender, Purple, Black, Silver  
Gray, White

POLICEMAN CLUB  
#1412 - 65¢  
12 1/2" long, made of black inflated plastic.

COLONIAL HAT  
Tan velvet bowlers,  
purple, teal blue or  
red velvet.  
R or C size #109 - 13.95



MLP RUBBER SHOES



Made of green rubber.  
These fit over  
the shoes.  
#D-139 - 3.95  
pair.

MRS. LIBERTY  
Red and white cotton skirt,  
blue velvet blouse. Sizes  
A or B #110 - 11.95

FLORIAN WOMAN  
Grey knitwear. Sizes  
A or B #112 - 12.95

Expanded cinema isn't a movie at all: like life it's a process of becoming, men's ongoing historical drive to manifest his consciousness outside of his mind, in front of his eyes. One no longer can socialize in a single discipline and hope truthfully to express a clear picture of its relationships in the environment. This is especially true in the case of the intermedia network of cinema and television, which new functions as nothing less than the nervous system of mankind.

... But when you're really involved with the thing you want to experience, you stop conserving it. Art finally becomes a barrier to accepting what is. Art stays within its closed circle and really never does. Art is a symbol for reality. Symbols are never going to free you. But it would be foolish to say "Stop making art."

James Whitney

The individual's ability to apprehend, capture, generate, transmit, duplicate, replicate, manipulate, store, and retrieve audio-visual information has reached the point where technology results in the rebirth of "cottage industry" as conceived by the economist William Morris during the Industrial Revolution in England — the autonomous ability of the individual to generate his own industry within his own local environment. The primary difference between Morris' pre-industrial view and today's post-industrial reality is that cottage industry and global cybernetic industrialization interpret each other's spheres of influence synergistically, each benefiting from the other.

... However, means have been devised through which even the hologram may no longer need "reality" to exist ... Moreover, the ability of holography to record natural phenomena that exist beyond the range of human perception — shockwaves, electrical vibrations, ultrasonic-motion events — could contribute to an experience of nonordinary realities totally beyond the reach of conventional cinema or television.

No. 10-8 JUNIOR FOLLOW SPOT - Price, 182.00  
Delivered with stand, color frame, built-in tray, 25 ft cable and plug. Has 3 lens system; 2 stationary; one with control on side of lamp to obtain either a soft edge spot or a sharp clear edge. Can be adjusted from 18" head spot at 100 ft. to full stage flood as controlled by following handle. Uses 1000 or 1500 watt lamps.  
Accessories:  
1000 watt lamp, T20 PAB, 12.50  
1500 watt lamp, DTJ, 16.20

FELT HIGH HAT

Rolled brim,  
black only.  
#1180 - 2.00 each  
PAPER STAGE MONEY  
Assorted denominations.  
1312 - 100 pieces - 45¢  
1000 pieces - 3.50



## Creative Theatre

Kelly Yeaton's pick of quotes:

... the stage is not a picture, it is a place.

... a new world in which every application of science has contributed to human loneliness. Our training prevents, the motor car, the phonograph, the radio have given an enrichment that has been paid for by isolation.

... the new dreamers have watched the efforts of a world to restore community and have caught a vision of the theatre as peculiar the art of community.

... we have for several centuries failed to discern that the theatre's essential art is motion, and that we can have no great theatre until we find it and cleave to it through all distractions.

... We must reaffirm our belief that the theatre has its source in the highest of mysteries and however incompetent we may be to utter their deepest truths, we are still dwellers in it as great prophetic voice as in any other human institution.

... We must learn to see Shakespeare and Kaldass as prophets no less than Job and Isaiah, and to say that Archelus, no less than Enock, walked with God.

... they say it is a law of life that every creature is at once pupil to someone higher than himself and master to some lower, a link in a great sequence, each instructing in the measure that he instructs, and spiritually nourished in the measure that he nourishes. He is a conduit. If he is stopped below he must stagnate and can receive nothing from above.

... a theatre in a village at the end of the Sacred Road north of Athens was called the Theatre of the Advent of the Earth Mother. One did not say of that theatre, "I think I'll see you to Eleusis tonight and see what they are doing." One said, "If I am patient and worthy, please God, I shall one day be admitted to that theatre."

... Emperors, kings, poets, philosophers and soldiers came to it from all over the known world. It theme was the vicissitudes and triumphs of the soul of man, and it was on this policy for eight hundred years. When I think of that theatre all things seem possible.

Creative Theatre, by Roy Mitchell. John Day, N.Y. 1929, now reprinted by Kindle Press, Westwood, N.J. Obtainable only from ODS Publications, 150 West 52nd, New York City. Paper \$4.95, Cloth \$7.50.

## Simon's Directory

"Of Theatrical Materials Services & Information." Where to find play leases, actors' agents, costumes, make-up, scenery, curtains, projection systems, lighting, props, sound equipment, signs, photographs, books, periodicals, foundations, and so forth. Covers U.S. and Canada.

—SB

(Suggested by Bob Shell)

Simon's Directory of Theatrical Materials  
Services & Information  
1966; 240 pp.  
\$4.60 postpaid

from:  
Package Publishing Service  
1564 Broadway  
New York, N. Y. 10036

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## The Film Director As Superstar

If you've always hated Pauline Kael anyway and you've been mildly treated because your 5 or 6 old kid sister just completed her 3rd on-the-street-very-inch-true-to-life documentary, then you will find comfort as well as real hope between these covers. This is one of those rare books on film that actually comes out and says what up till now you felt only you and Godard understood—that film is Revolution not A Wave and its credo is the novelty of just going out and doing it. Now that we have been amply and repeatedly assured that we are on the threshold of a technological and aesthetic revolution in movies which will inevitably restructure human consciousness and understanding, this book says that the new sensibility obviously would be awfully nice in 20mm Panavision but that it will work in Super 8 too. Which is just another way of saying, Hey, remember 2001 is probably the most awesome underground movie ever made (\$10,500,000) before, lean and craned, you tell your soul for a apprenticeship on Mary Poppins. The 16 interviews that follow are a cross-section of independent directors— all of whom are just as interested in finding a new life style as a new film style. They are all, in one way or another, outsiders from Jim McBride (Greetings) whose \$2500 1st film still hadn't been shown theatrically 2 yrs. after he made it, to Roman Polanski who says definitely that he's not obsessed with the bizarre and that his next film is going to be done as he sees it with the impression it was done without any effort. But, of course, there is a lot of effort behind it, a lot of struggle. And as for realism, the only way to reduce people into believing you—whether they want to or not—is to take painstaking care with the details of your film, to make it accurate. Sloppiness destroys emotional impact.

## The Film Director As Superstar

The Film Director as Superstar  
Joseph Gelmis

\$3.50 postpaid

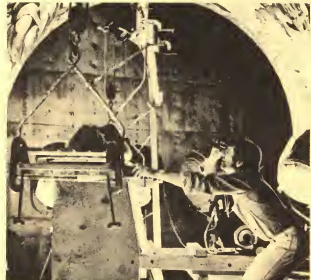
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or WHOLE EARTH CATALOG

Joseph Gelmis

P. Yes. The older I grow, the more I value simplicity. The more difficult it seems to me to make a simple film. I want my film to be done as the people who see it see it with the impression it was done without any effort. But, of course, there is a lot of effort behind it, a lot of struggle. And as for realism, the only way to reduce people into believing you—whether they want to or not—is to take painstaking care with the details of your film, to make it accurate. Sloppiness destroys emotional impact.

(Roman Polanski)



(Reviewed by Barbara DeZonia)

(Jim McBride)

Everybody's looking for young talented directors. But what they all do is: they'll take you, a young talented director, and take a young talented writer, and a young talented producer and they'll give you young talented property about young talented people and they'll put you all together and you'll make a young talented film." So they've called me up and said, "We're interested in you." And I say, "Well, I'm interested in doing this movie. I'll send you a script." And they say, "Well, we've got this famous book," or something like that. So I say, "Forget it."

(Lester)

## Take One

TAKE ONE is a bi-monthly no nonsense film magazine that reviews a good number of low budget films, documentaries, and foreign releases which generally escape the notice of the big slicks. It has information on film festivals and some new product material... so it is directed toward both the filmmaker and the filmwatcher.

(Reviewed by Ron Carragher)

computers as amplifiers of human imagination... graphic display systems using "light pens",... at which the artist can draw, ask the machine to rotate his drawing, (move it in many ways)... and put it on film... simultaneously making an electronic sound track... an animation... drawing of great detail done in minutes... computer sensing systems that study the eye's movement over research material and when the eye rests on an image, the image automatically enlarges; if the eye rests for a longer time on the same material, the image changes... (Imagine a French lesson on an electronic page full of words that are going by rapidly, you are reading from a display scope or tv screen. If a word is doubtful to you, by looking at it for three seconds it will enlarge itself above the other words; if you are still looking at it three seconds later, it will automatically change into English...)

## Filmmakers Newsletter

The Filmmakers Newsletter is a clearing house for all and any information pertaining to filmmaking. As such, it's without any competition and fills a real need for the independent filmmaker. Regular features include a national-wide calendar of special film showings (both underground and classics), free classified ads, detailed information on film festivals, a technical question and answer column, and ideas for building cheap film equipment. They also print interviews, essays, and word of any film workshops, conferences, and schools. They claim to accept paid ads only from companies willing to do business with low-budget independent filmmakers. Only one complaint: a regular \$5 subscription brings the "Newsletter" bulk mail—and the news is often out of date. If festival application dates and film showing times are really important, add \$3/year for first class mail.

(Suggested and reviewed by  
Phyllis Wilson)

## Filmmakers Newsletter

\$5 for 11 issues from:  
Filmmakers Newsletter Co.  
80 Worcester St.  
New York, N.Y. 10012

## Take One

\$3.00 / 12 issues (bi-monthly)

from:  
Unicorn Publishing Corp.  
Post Office Box 1778  
Station B  
Montreal 110  
CANADA



## International Film Guide

Well, as it says right on the front, this is a "record size survey of film in 32 countries with at-glance guide to Festivals, films on 16 mm, film books and magazines, shorts and animation, film schools and art houses." Hard to beat that except by the Saturday Review's comment: "eminently informative." Well, and then too it has lots of nice stills, in-depth articles on Anderson, Chabrol, Ichikawa, Pasolini, and Skolimowski, a world production survey with articles on new films from everywhere from Israel to Romania to Bulgaria, a list of all current film co-operatives and operating theatres around the world, and a review of all new magazines and other publications dealing with film, plus a list of film archives and film services... and all sorts of other stuff crammed in these few little pages. Make friends with someone who reads sub-titles well and you'll be set no matter where in the world you are.

(Reviewed by Barbara DeZonia)

## International Film Guide

Peter Cowie, editor  
1970, 448pp.

\$3.95 postpaid

from:  
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Canbury, New Jersey 08512

or WHOLE EARTH CATALOG



## Anthology Film Archives

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—\$8

Anthology Film Archives  
425 Lafayette St.  
New York, N.Y. 10003

Age, James:  
Anger, Kenneth:

In the Street, 1952 (with Levitt and Leeb)  
Fireworks, 1947  
Puce Motion, 1949  
Eaux d'Artifice, 1953  
Inauguration of the Pease Dome, 1954/1966  
Serpent Rising, 1963  
Kustom Kar Kommandos, 1965  
Invocation of My Demon Brother, 1969

Baillie, Bruce:

Mass, 1963/64  
Olive, 1965  
Castro Street, 1966  
All My Life, 1966  
Valentin et les Sierras, 1968  
Allures, 1961  
ReEntry, 1964  
Phenomena, 1965  
Samurai, 1967  
Carnegie, 1970

Beison, Jordan:



Mr. Olney didn't recognize D.R. but when D.R. identified himself he remembered. He had buried D.R.'s father and both his grandparents. And now there was Emmitt's body following theirs through the same treatment in the same treatment rooms. Let it happen, D.R. thought. I hate it but let it happen anyway, there's nothing else to do.

Mr. Olney was a nice old man actually, but D.R. had trouble with him. He said how much is this one? and when Mr. Olney said eleven hundred dollars D.R. laughed and got the cheapest thing he had. This one's two hundred and twenty, Mr. Olney said. It's our cheapest model. D.R. said I'll take it.

Mr. Olney sold suits and shirts and ties for thirty five dollars a set. D.R. said he couldn't afford that much, that what he'd like to do is help dig the grave and maybe get the suit off price. Mr. Olney said he believed he could manage that, and suddenly D.R. was sorry he'd acted weird toward Mr. Olney. He's just an old undertaker, D.R. thought. Be kind to the old and the dead.

I'll be old myself before long.

I'll be dead myself some day.



## Guide to Filmmaking

*ed pincus is a careful man, once a logician of sorts, now a cameraman. he's taught still work at the visual arts center, harvard, and now is at the mit film department. his book is carefully done, thorough, nicely indexed, easier to use than the american cinematographers manual, and probably more useful to the student. and it only costs a buck fifty. its good, ed. hi, jane.*

-jd

## GUIDE TO FILMMAKING

**Guide to Filmmaking**  
Edward Pincus  
1989, 268 pp.

**\$1.50** postpaid

from:  
The New American Library, Inc.  
1301 Avenue of the Americas  
New York, New York 10019

or WHOLE EARTH CATALOG

## American Cinematographer

*Accurate, specific information on what's new in equipment, techniques, standards, and the attitudes of technicians using them. Also gossip and news about who's doing what where. Covers all aspects of professional filmmaking from Hollywood Super Panavision 70mm to 8 mm educational loops.*

*The ads, fully as important as the text, are mouthwatering for those with an appetite for Eclairs and such.*

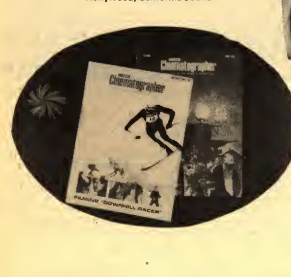
*If you read it regularly you'll never need Babelyde—you'll know how it's really done. Often the information is directly and simply usable; sometimes it stimulates visions of the super-cinema of the future. When in school I consulted back issues for a psychology paper on perception. The articles are really interesting and, best of all, there is no film criticism so you avoid all those negative emotions.*

[Suggested by Gordon Ashby  
Reviewed by Sandra Thierpin]

## American Cinematographer

**\$8.00** for one year (monthly)

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American Cinematographer  
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**16. 16MM CAMERA—FILMING WITH SOUND.** Cameraman (left) is shooting hand-held with an Eclair NPR. Soundman (right) is using a Nagra III NPH tape recorder with Sennheiser B04 shotgun microphone with a Bolex. (National Educational Television)

The book is intended to give a fairly precise idea of how much it costs to do various types of films and the way to go about making these films. It is a production manual, including all the information the serious filmmaker will need about the technical side of making movies.

A whole breed of filmmakers and potential filmmakers is appearing for whom 16mm is the professional film and super 8mm a serious amateur gauge which someday may be a professional gauge. Much of the information for one gauge is relevant to the other. This book discusses them both, emphasizing 16mm, pointing out the differences in the narrower film.

If you have been thinking of shooting your films with double-system sound, and if your camera has a synchronous motor, for about \$300 in parts, and a little labor, you can construct a signal generator that can be used with a number of tape recorders to permit the synchronism necessary for double-system work. Furthermore, the construction is so straightforward that even if you are absolutely unhandy with tools, the labor charges for constructing the gadget should be well within the budget of even the most cost-conscious producer.

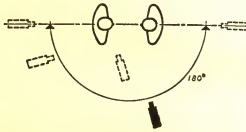
The unedited footage is called *rushes* or *dailies*. Almost invariably there is a considerably greater amount of rushes than there is of final film. The ratio of film shot to final footage is usually between 5:1 and 10:1. But the ratio varies tremendously depending on the type of film being made and the method of filming. Peter Emmanuel Goldman's underground classic *Medium Cool* of 1965 was done using a ratio of less than 2:1 for an hour-long film. At the other end of the spectrum, documentary filmmakers who use no script often shoot ratios higher than 40:1, which means shooting over 90,000 feet to end with an hour's length of film. Of one of the most difficult tasks in writing up a budget for a film is to estimate the amount of footage that will be needed.

When there is a script for a film, a great deal of additional footage is shot to give the editor a selection of shots and to guarantee that there will not be any continuity gaps either within scenes or in the story line. It is not unusual, when two possibilities for a story line exist, for both to be filmed and the final choice delayed until the film is being edited. Often the same action is filmed several times in several "takes" to get different camera angles (positional) and to guarantee that the actors have performed their task well.

In much black and white photography, correct exposure for the subject will give you a pale, washed-out, and cloudless sky. A sky darkened too much (by using a heavy filter) will have a phony, heavily dramatic quality. The bluer the sky, the easier it is to darken it and the less filtration needed. When the sky is overcast or misty, filters will not be very effective. The sky near the sun and on the horizon is often almost white and does not respond to filtration. If the film is overexposed, the filter effect may be largely lost.

If you wish to bleach a blue sky, a blue filter will do the trick.

As in all things, it is often hard to find yourself in film. For some, the way to make their films alone. For others, film is essentially a group enterprise. In film you may be able to find yourself, under stand the world, show others what the world really is, and, finally, change it.



**The 180° rule:** If we draw a line through the main action, any camera position on one side of the line will preserve screen direction.

## American Cinematographer Manual

*Indispensable data book, used by American cinematographers. Expensive, because it is absolutely comprehensive, up to date, from Hollywood, and has no competitors.*

[Reviewed by Sandra Thierpin]

**American Cinematographer Manual**  
Arthur C. Miller, Walter Strong, editors  
newest edition 1989; approx. 600 pp.

**\$15.00** postpaid

from:  
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(LEFT) The Handiola is a device for achieving instantaneous positive interlock sync. Once picture and track start marks are aligned in their respective units, sync is maintained by simply sliding tape transport assembly 1/4-inch toward viewer. Shaft engages the viewer's sprocket for positive interlock between both media, running forward or backward; movement of either medium causes the other to move in sync. Note inching knob on front of tape transport or precise cueing without handling tape or film. Accessory frame counter is shown installed at right. (RIGHT) Pen points to interlock shaft, at point of connection with viewer. 3/4-inch movement of tape assembly establishes and releases interlock.

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32	1.5	1.5	1.5
48	2	2	2
64	3	3	3
96	4	4	4
120	5	5	5
160	6	6	6
240	10	10	10
480	16	16	16
960	21	21	21
BELOW NORMAL SPEED			
FACTOR	EXPOSURE	FACTOR	EXPOSURE
24	0	0	0
32	1.5	1.5	1.5
48	2	2	2
64	3	3	3
96	4	4	4
120	5	5	5
160	6	6	6
240	10	10	10
480	16	16	16
960	21	21	21

Q. How can I produce a night effect in the daytime using color film?

A. This is the question we most frequently receive, and though the answer has been given many times, still the key to the question is to underexpose two stops. Additional techniques which assist the illusion are to photograph the scene in back-light, using lights or reflectors as fill lights on the players. When such are not available, use front cross-light. By all means avoid any white sky in the scene. You may use a BSNG filter, but disregard its factor. The NG (Neutral density—8 transmission) portion of this filter will reduce the light transmitted by two stops. Therefore, you judge the exposure as if you were using the normal No. 85 filter for a day exposure; the NG portion cutting two stops will produce the underexposure necessary for a night effect.

It will further the illusion if you can include in the scene some light source—such as lighted windows or street lamps. These must be boosted by using photo-flood lamps—using tracing paper or Bon Ami on the glass of the windows to diffuse the light from the naked globe.

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[Suggested and reviewed by Bruce Schmichen]

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## SMPTA Publications

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-SB

Society of Motion Picture and Television Engineers  
9 East 41st St.  
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Selection and Specification of Rear-Projection Screens  
By Petro Vlahos. Reprinted from the February 1961 *Journal*. A detailed examination of rear-projection screens.  
7 pp. NC1

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Oh for out, for out, far out. It happens with such speed, it swooshes by with such perpetual haste. There he was already, him and Leonard, helping the two guys from Olney's Funeral Home dig poor Emmitt's grave. There in the family graveyard, one corner of it buried by overburden from the mining on the slopes above, rocks as big as people's heads scattered over the graves. One headstone (Daniel Hutchins Collier, D.R.'s grandfather's brother, born 1887, died 1932) had been knocked over and broken straight across the middle by a rock from the mining up above. The graveyard was at the edge of the pasture, when there had been a pasture. D.R. used to pass it all the time, going to get the cow, out walking with his grandfather on Sunday afternoons, or just in the pasture by himself at any odd time, for no reason. D.R. had been visiting that graveyard of his ancestors as long as he could remember, and now here he was again, helping to dig this time. How strange that was. How swiftly it moved along.

Leonard finished his turn digging and sat down beside Royce's grave to smoke a cigarette. Royce was buried just uphill from where Emmitt was going to lie. Royce Collier, his gravestone said. Among The Angels Now. Beside Royce were his sister Blanche, and his father, who'd outlived him, and beyond his father, his mother, who'd outlived them both. D.R.'s mother wasn't in the Collier graveyard. She had died a Davenport in Illinois somewhere. Leonard sat near where she might have been if fate had willed it to, and smoking he looked up the hill toward the curve of the slope and told D.R. how the strippers had come, from left to right, peeling the trees off first, then the cut, then the blasting and finally the exposed coal seam. The only image D.R. could get was of road builders indiscriminately hacking through the pasture, and Leonard said that was pretty close to how it was.

D.R. asked Leonard if the overburden above the cemetery was stable, if rain would loosen it and let it slip on down across the graves. Leonard said there was a chance of it. He said that down behind the main house it was definitely going to slip some more but up there, maybe not.

What if it does, D.R. thought.

What difference would it make?

In the corner of the cemetery where the slide had broken through the picket fence, D.R. picked up a piece of shale that had some fossils in it, little shells of ancient creatures that millions ago had been alive. Buried all this time and now uprooted, D.R. thought. And he thought of his father's bones, and his grandfather's.

And he thought of his own bones, too. His living hand held the ancient shale. Some day that hand itself would fossilize, and what difference does it make how deep it's buried down.

Down, they went down with Emmitt's grave. Down, down. Three feet. Four and six inches. Five. Right on through supper time, into evening they dug, taking turns, resting, going on again.

D.R.'s hands were blistered bad when at five feet eight inches Leonard said boys that's good enough, let's quit.

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## Motion-Picture Projection and Theatre Presentation Manual

Don V. Klopfel, Editor. This Manual details operational information for the projectionist and theatre personnel in a concise and convenient form. It is to be used as a guideline to good motion-picture presentation in the theatre.  
1969 hardbound 190 pp. illus. \$7.50\*



## Total Picture Control Zone System Manual

Three teachers and two books taught me photography. John Collier showed me the objective power of photographs (anthropologists with a Polaroid start far more informative conversations than anthropologists without). Minor White showed me how to go into mild trance to see directly. Jack Welton showed me that the main obstacle to good pictures is my own ideas and arrogance (an entire class of us shot better pictures—better by every standard—blindfolded than we did in the usual way).

Total Picture Control, a good technical unimaginative book, showed me how to use lenses, filters, view cameras, settings, print papers, the whole tool kit, to get what I wanted. It displayed the basic range of possibility.

Zone System Manual, by Minor White, gave me Ansel Adams' zone system of photography in distilled form. The key is *previsualization*, which is looking at reality through an accurately imagined photographic print, then knowing how to make the calculations and mechanical and chemical adjustments so the print has what you saw, plus any divine grace that happened by.

—SB

### Total Picture Control Feninger

Revised edition 1970  
\$12.50 postpaid  
from:  
Chilton Book Co.  
801 Walnut Street  
Philadelphia, Pennsylvania 19106

or WHOLE EARTH CATALOG



### Zone System Manual Minor White

1966, 112 pp.

\$2.50 postpaid

from:  
Morgan & Morgan, Inc.  
26 Main Street  
Hastings-on-Hudson, N.Y. 10706

or WHOLE EARTH CATALOG



### ZONE

a "Zone" as a visual unit of measurement is arrived at by altering a standard exposure by one "stop" more or one "stop" less. For example all the values in a scene exposed at  $f/11$  at  $1/25$  second would print one "zone" lighter than a print of the same scene exposed at  $f/16$  at  $1/25$  second. (Providing

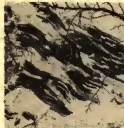


The composite picture at the left illustrates why straight lines must of necessity appear curved in all super wide-angle renditions. Each of its three components was taken with an ordinary camera and a lens of standard focal length. The perspective of such is "normal"; with the camera in level position (center), verticals are rendered parallel; with the camera pointed upward (top), verticals converge toward the top of the picture; with the camera pointed downward (bottom), verticals converge toward the bottom of the picture. Each of these photographs encompasses an angle of approximately 47 degrees. Now, if all three were combined in one single shot encompassing three times 47 degrees, or approximately 140 degrees, how would perspective be manifest? It would appear as in the Penon shot on the opposite page which encompasses an angle of 140 degrees in which the actually straight verticals of the skyscraper are rendered as curves.

(Total Picture Control)



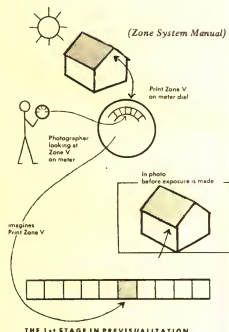
Extend previsualization until the negative image below can be seen in your own eye



While looking at this (Zone System Manual)

of course that the two negatives were given identical development time and the same exposure time in the enlarger.) This "one Stop" or "one Zone" alteration, links the "zone" to the classic 1:2 exposure ratio used in photography to calibrate shutter speeds and diaphragm openings or "stops."

(Zone System Manual)



## LIFE Library of Photography

Recently I enjoyed an airplane magazine in which all the features were illustrated by the authors. What a difference. Instead of glamorous eye candy, the pictures were frank, densely informative, thoroughly tied in to the articles. Photography, especially professional photography, is best in the hands of skilled amateurs. Sharper than words photography is a reality medium. No specialist elite should monopolize that kind of power.

I believe these are the beginner's books I've been looking for ever since we started the CATALOG. They cover the territory—camera, printing, film, history, photojournalism. They have sensational pictures (and price to match), and fine practical information like "Camera Buyer's Guide," "Darkroom Equipment," etc.

Get a Polaroid Swinger and play around for a while. If you like the pictures to where you want to use the medium, get a 35 mm and some used darkroom equipment, develop your own film and prints, and mention the LIFE photography books to relatives in November.

—SB



Polaroid Land Camera. Sometimes thought of as an instrument designed purely for amateurs, the Polaroid Land Camera is a cherished professional tool on hundreds of weeklies and small dailies. Its almost foolproof operation enables reporters with little photographic training to get

good pictures. The 3 1/4 x 4 1/4 pictures are large enough for a hurried editor to judge without a magnifying glass, and most important of all, the instantly available prints can be sent directly to the engraver without darkroom processing—an obvious advantage under the pressure of

deadlines, aside from being a cost saver. A special film pack, usable on some models, can produce not only positives but negatives to make additional prints for presentation to local celebrities—a good-will practice sometimes followed by small papers.

Photojournalism

The Camera  
1970, 235 pp. & Camera Buyer's Guide  
Light and Film  
1970, 227 pp. & Guide to Camera Accessories

The Print  
1970, 227 pp. & Buyer's Guide to Darkroom Equipment

Photojournalism  
1971, 227 pp.

All \$7.95 plus postage

from:  
Time-Life  
4200 N. Industrial Blvd.  
Indianapolis, Indiana 46254



DUANE MICHALS: The Illuminated Man, 1969 The Print

There is a lot of bullshit about photography; it is easy (and usually) a subject for egotistic subjectivism and it is much in the hands of the people that push consumption. But like any other art form, the thing is to shut up and get dirty learning, working, feeding it. For come this way and perhaps can help. There are a few good books:

The first book is *Chas. Suedand's A Guide to Photography*. It is a hard-to-find book available from the publisher, 5019 W. Belmont, Chicago, Illinois 60641, for \$5. It is the best starting book; it is simple, direct and complete as the Donor's Camera and children can use it. The mechanics of the beast are explained by a working photographer and teacher and by a streaming book designer. Basic.

It will get you out of the Popular Photography bullshit of one thing, one issue, another, the next. It will be enough for the person who wants a simple image—getting that consistently isn't easy. So the beginning book is one title.

There may come a time, though, when you wish to make love with it, form, form, fix energy. The process is capable; photography can be an art form with just as much subtlety of creation as poetry, music, dancing, weaving. Go to the index of the *Life* series on photography and look up the photographs of Ansel Adams, Brett and Edward Weston, Paul Capogrossi (these are my favorites) and... This is the business of the first print, and consider that reproductions almost always run a poor third to the original print.

You can do it. Hell, you can do it to yourself!!

You may want to do 35mm, perhaps large format—negatives 4" x 5" up to 11" x 14". It involves the use of the zone system of exposure and development. The knowledge won't be wasted even in 35mm. As for printing the negative you get, the more is more information comes largely from the same sources that will tell you about the zone system. There is one book (or rather a series) that has compiled the Ansel Adams series. True they were written nearly twenty years ago and are \$3.98, but this man must know more than any other one (or many) person about da paradigm. Some find him confusing but those who work his books find it the teachings of a master—semingly contradictory and incomplete but rich for those who will try it, work it, re-read it, understand some more, work some more.

It is a book for application, not a neatly wrapped set of answers that spoil your appetite. The core of the series are *The Negative*, *The Print* and *Natural Light Photography*. There are others in the series. In *The Print* for example there is a chapter devoted to developers, on what goes in them and what those ingredients do. At the back is an appendix with a table of nearly twenty developing formulas that you can mix yourself—and play tests, print colors and contrast ranges like steps on an organ. Maybe there is space age chemicals in cans these days and a look at the man's pictures of I want to fucking know the stuff I work with.

These books are the richest single source of information on how to fly with this set of wings; there is even a good part of *The Negative* devoted to "miniature cameras": 35mm and 28 square. ACCESS. This man is a concept printer, a photographer and a master. See his photographs and books. He knows how.

*The Life series* is that the best set of pictures around, bar none, everything is represented. But I don't dig it. My taste perhaps, but I find it a bit sterile. It is complete, complete, complete and very national. Strained. And the questions are generally posed and answered. Spoils that appetite like a p. high physics book. For those interested in a specific tag and to chew on, to learn from—very little. Such a thing is not a tool but an intellectual candybar. How do I make platinum prints, eh? Where do I get the chemicals, what precautions do I take? Well, maybe you'll pick up on something—and do your seeking elsewhere. It does have a damn good set of pictures.

If you wish your prints to last forever, there is the East Street Gallery permanence publication. 50¢, available from 1408 East Street in Grinnell Iowa, 50112 in membership. Say you might make it last 3000 yrs; I wish I was that important.

For those who want to get into the alchemy of mixing their own fancy chemicals, you can still order most everything through Kodak via your local photo store and get a week's delivery. For the really weird stuff such as Amidol or Pyrocatechin, try Dignan Photographic, Inc. 12304 Erann Street in, yes, North Hollywood, CA. They also have an excellent publication, *Booklet No. 8, Photographic Chemical Facts and Formulas*. Tells you what chemical do, it more complete and up to date (it is technical only) than Ansel. \$2.50.

*The Zone System* hasn't been fully explained yet. Minor White's book is the most complete account. Ansel has said information about it in *The Negative*. Both of them are talking from the application viewpoint and it's a bit like describing the Elephant. They don't tell you how else it might be done. Now the figures development times off of zone eight, Ansel off of six and they. Try Minor but pukes; don't get the idea it's all that tricky. I've worked with Paul Capogrossi; a lot of the time he'll merely take a few too readings and make the exposure. Fast. Simple. And you get a lot more room for creation, expression and like that.

There is a book for telling you how to do platinum, palladium and gum arabic prints. Other processes, too, all of days gone by. Interesting. They're powerful, could be a luxury item if you've got the negatives to print out. A platinum print is a rich brown (tag-like) or glowing silver color and has incredible light emitting misty depth to it. You make the paper, that is, make the emulsion and then coat a stock (of your choosing) with it. I haven't yet done it but imagine it would be as hard as making DMT (which I haven't either). And gum arabic prints are made without silver (it's getting scarce and may disappear from the printer market) and can be of any color (not just black and white). I don't know the price. It is a Handbook for Contemporary Photographers by Arnold Gassen who is an assistant professor of art at Ohio U. in Athens. O. The handbook is distributed by Light Impressions, Box 3012, Rochester, N.Y. 14614.

And for the technically minded, there is Todd and Zalka's *Photographic Sensitometry* (Morgan & Morgan, publ.) (\$95 list, I bought for \$7.95 at the Rochester Inst. of Tech. bookstore). This is a well rounded scientific treatment of light sensitive materials. Micro and macro physics, statistical mathematics, etc. While it will tell you more than you want to know, it may have valuable information. For instance, the graphics-oriented person may wish to know primarily how to twist the critter's tail in the darkroom, being less interested in the reproduction of a visual experience than he is in the manipulation of the materials. This book would tell him a good bit about 'effects', as they're called scientifically, but he could use.

Good luck to make it happen.

Stewart Dean  
West Coast, Conn.

## Camera

## Aperture

Two magazines have consistently outstanding photographs, Camera, from Europe, has every issue a whole different kind of photographs. Of all the magazines we see at WHOLE EARTH this is the one that gets cut up and pinned to the walls. Aperture, Minor White's magazine, carries camerawork as a mystical tool, not O Boy! God! but how to see and see until you see through and back.

—SB

Camera  
Ansel Porter, ed.  
\$14 /yr (monthly)

from:  
Camera  
C.O. Busher Ltd.  
CH-6002  
Lucerne, Switzerland

Aperture  
Minor White, ed.  
\$12 /yr

from:  
Aperture, Inc.  
Elm St.  
Millersville, N.Y. 12567



Richard A. Egli, Camera



(Aperture)



(Aperture)



Duane Michael, Camera

## Conclusions

1. That the photographer is in a poor position to forecast how well they will respond to his pictures. (a) because he was there at the moment the exposure was made, or at least thought that he was there. (b) Because he assumes that as soon as his camera is paid for that the pictures emerging from it are his.
2. The remedy is to learn to look at his own photographs as if they were made by some other photographer.
3. The remedy, if applied, becomes a discipline that separates the man from the boy.

In learning to predict responses it is better for the photographer if he has the direct experience of gathering responses to his pictures than to read extensively about such matters. It is better to have the direct experience gives an opportunity to study himself and his work in relation to the world.

(Aperture)



On their way off the hill Leonard stopped off at the homeplace to show D.R. how to feed and water Emmitt's rabbits and his chickens. There were forty rabbits in eleven hutches, and about a dozen banty chickens to feed, a half hour chore even when you knew what you were doing. D.R. worked along with Leonard, and listened to him, he wanted to learn this work.

But his mind was still on Emmitt's grave.

Leonard invited D.R. home with him to set supper but D.R. said he didn't feel like eating.

He said he wanted to be by himself a while, and Leonard understood.

As soon as Leonard was out of sight downhill D.R. went back around the hillside to the grave.

A grave.

That is a grave.

That dark opening

That dark there is a hole in the ground for Emmitt's body. It's Emmitt's body's home now. We're going to put it in a box and put the box in the hole tomorrow afternoon and cover it with dirt and leave it there for years and years and years. Worms are going to eat his flesh and devour the casket, and in time even his bones will turn to dust. We're going to plant Emmitt here tomorrow like a seed.

He's worm-food now.

D.R. was sitting on the mound of dirt they'd thrown up, looking at the hole. Above him was his father's grave, and all around were graves of long dead people who had died him, and it was dark and overhead some early stars were shining as they had the night before, how many nights before? In the ground, D.R. thought.

In the ground.

Out loud, D.R. said: in the ground.

And without really deciding to in his mind, D.R. scooted to the edge, then bracing across the corner of the grave he lowered himself into it, and lay down on his back and closed his eyes.

This is Emmitt's wake, he thought.

This is Emmitt's wake. I am waking here for Emmitt.



## East Street Gallery

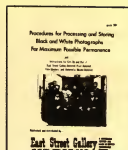
The East Street Gallery, a cooperative community located in Grinnell, Iowa. Photography, publishing and the making of photographic equipment provide the economic base of the community.

They put out an extremely honest and thorough as can be booklet . . . It contains the results of their tests, and organizes the scattered information relating to the processing and storing of pictures for maximum permanence . . . an issue neglected by too many photographers who otherwise care about that they are doing.

They also describe in detail their high cost, but very high quality and efficient film and print washers and timing device . . .

[Suggested & Reviewed by Will Endres]

Nearly all the negative filing devices now on the market are very destructive to silver based film emulsions. This is especially true of the common "traff paper" and glassine sleeves. These negative containers contain excessive amounts of sulfur and other harmful chemicals. Also, many of these containers contain glue in the seams which over a period of time may cause severe damage to negatives. It may currently be assumed that no paper or glassine container is safe for long-term storage of negatives or prints.



## Procedures for Processing and Storing Black and White Photographs for Maximum Possible Permanence.

\$.50 postpaid

from:  
East Street Gallery  
1408 East Street,  
Grinnell, Iowa 50112



Archival Print Washer \$105  
Archival Film Washer \$15  
Automatic Washer Control \$54  
Water Collection Base for print washer \$29

## Cheap Kodachrome

For use in my teaching and for pleasure I buy a lot of Kodachrome for slides. And, after fifteen years, I've decided that Kodak is the best operation to do my developing. I order 35mm Ektar 36 exposure cartridges with Kodak developing mailers from an outfit in New York City. For \$36.47 I get ten rolls (360 pictures) at a cost of less than a dime per slide counting postage, film, developing, and even 6% sales tax. Order from outside New York and they don't even charge sales tax.

I used to buy film at discount stores and camera shops which charge, typically, 200 per cent of my present cost and for the same product.

I order from 47th Street Photo, Inc., 67 W. 47th St., New York City, 10036. I like them. They even charge my order to my credit card number (Master Charge, or BankAmericard) and save the price of a check.

Jemil Ousaid  
DeWitt, N.Y.

## Index to Kodak Technical Information

Lessons in eye-hand coordination—Keys to holding your camera steady. . . learning photographic terms. . . How to record eclipses and starlight. . . choosing the right film. . . In the darkroom: theory and technique. . . photomicrography. . . graphic arts techniques. . . infrared. . . Pictures in extremes of weather (and of extremes of weather). . . Projection. . . filters. . . extra-long exposures. . . Scientific photography. . . Low prices and good mail service make it profitable to pick the brains of Kodak's researchers and staff photographers. Information useful to novice and pro alike. . .

When you see a picture, this catalog will probably guide your hand. But first you have to SEE. . . and that is another thing entirely.

[Suggested and reviewed by Gary Brassch]

## Index to Kodak Technical Information

free

from:  
Eastman Kodak Co.  
Rochester, N.Y. 14650

## Kodak Projection Calculator and Seating Guide;

9-69; \$2

Calculator is a three-part aid for computing factors such as image/screen size, projection

## Bibliography on Underwater Photography and Photogrammetry; 8-68; 25¢



Kodak Master Darkroom DATAGUIDE; 2-70; \$3.95  
Data for black-and-white processing, printing, and copying.

## Dignan Photographic

If you try to find information on the chemistry behind color processing you soon discover that it is hard to come by and the chemicals are equally hard to locate or purchase. Dignan Photographic can help you solve both problems. They publish a monthly newsletter which is full of information and formulas for both color and b&w. Many formulas are simplified versions of commercial brews which make them easy for the novice to use. Their C-22 for developing Kodacolor or Ektacolor film and their unicolor print paper formulas are easy to mix and use. Not only is it interesting but you can easily save 40 to 50%, sometimes more, on your chemical costs. Mixing your own also offers the possibility of doing things not possible with the commercial chemical kits. Dignan Photographic sells most of the chemicals you will need for color or b&w by mail order. Their newsletter covers many major products of Kodak, Agfa, GAF, Fujii, etc. It began being published Sept. '68 so you will want to order back issues. If you are a photographer who wants control over a large and important segment of photographic technology Dignan can help you.

[Suggested and reviewed by Terry Gritton]

Dignan Photographic Inc.  
12304 Erwin St.  
No. Hollywood, Calif. 91606  
Dignan Photographic Newsletter  
\$14.00/yr.

Catalog free on request.

## Merit Photo Supply

Lowest prices in film. Handling charge of 75¢ on all orders. Minimum order \$4.00.

—\$8

Merit Photo Supply  
Box 6011  
North Hollywood, CA 91603

1971  
(Prices effective  
Nov. 1, 1970)



## KODACHROME II

The universal favorite for color slides in daylight or with blue flashbuds. No unexcelled color quality and extreme sharpness, with moderate speed (ASA 15) and good exposure latitude.

K 135 20 exp. \$1.49  
K 135 36 exp. 2.10

## Prepaid Processing Kodak Mailers

PK-20, for 35mm 20exp. or 126 slides \$1.29  
PK-27, for 127,120,620 Ektachrome \$1.29  
PK-36, for Kodachrome or Ektachrome \$1.29  
36 exp. \$1.89  
PK-59, for 8mm roll or Super-8 50ft. \$1.29  
PK-49, for 16mm 100ft. roll \$3.10

## Kodak Ektagraphic Carousel

I've been working with tape-slide shows, and if audience involvement is any measure, tape-slide is fully as effective a medium as film. I use two Kodak Ektagraphic projectors, with the lamp circuits rigged so that one image can be dissolved into the other. The speed of the dissolve is controlled by a switcher-fader that I designed and built from two household light dimmers and a Spirograph game. I would be happy to share my invention with any other media freaks who are interested. Just write.

You reviewed the Kodak Carousel projector in Fall '69. Please tell everyone that the Carousel is good, but not as good as its big brother, the Kodak Ektagraphic. Advantages of the Ektagraphic: 3-connector power cord is permanently attached; Model AF has remote focus control, auto-focus, inner, longer-exposure lensmated optics, and all other features of the Carousel 860; all Ektagraphics are built more ruggedly than the Carousel; all Ektagraphics will center each slide horizontally, as well as vertically, for precise projection of lap-dissolve slides (important in tape-slide shows); all Ektagraphics have an extra fuse in the lamp circuit. The Ektagraphics are a light gray color, rather than the black of the Carousel. Cost is about the same as the Carousel. Ektagraphics are only available through audio-visual supply houses, and other establishments that supply equipment for auditorium, school, business, and industrial uses. See your local school district, or write to Kodak for dealers. Most audio-visual houses give up to 20% discount to schools and other good users, so you can frequently trade-in an Ektagraphic for less than the Carousel. The Ektagraphic AF has got to be the finest slide projector on the market.

I also want to tell you about the finest 35mm camera on the market—the Nikkormat FTN. I've used a lot of different 35mm cameras, including the Nikon F (\$150 more than the Nikkormat), and find the Nikkormat superior to all of them. Camera buyers should ask these questions at least: How complete is the selection of lenses and accessories (who can beat Nikon, Vivitar, Soligor, etc.)? How easy is it to change lenses (Canon and Pentax fall down here)? Do I have to move my finger to change shutter speed? Is the thru-the-lens (the only way) meter accurate and dependable? Do I have to change the camera? Is the shutter cloth, or titanium? Does the camera fire quietly and smoothly (the Nikkormat could be a little better in this category)? With a little hunting, you can get a Nikkormat with f/2.5 50mm lens for under \$220.

Jim Mitchell  
725 West Margaret  
Pasco, Washington 99301

I agree about the Nikkormat. Best prices are Hong Kong, see p. 232. A good buy on Carousels is on p. 227.

—\$8

## Spiratone

If you don't have much bread, or don't want to spend much, don't be put off (or put off by Nikon prices) with shopping for new photo gear. Spiratone handles almost every piece of equipment the 35mm enthusiast could want, under their own brand name. They sell lenses from a Riketye to a 500mm mirror and virtually all lens accessories. Their prices are ridiculously low. For the same money you'd pay for a Nikon 20mm lens, you can get a Spiratone Riketye, 200mm, 300mm, and 28 mm lenses. I have owned a Spiratone 200mm lens for three years. It's gone through a lot of heavy trips—never broke down—never been to the shop. I doubt if you can differentiate, with the naked eye, my Spiratone lens prints from my Nikon prints. Even the arch-dracons of the Nikon-Lens-Hateful cult, Poppy and Modern Photography, have periodically applauded a low-priced Spiratone innovation (e.g. See Pop. Photo Mag. May 1970 on Spiratone 50mm mirror lens). When I returned a defective lens, it was replaced by a brand new one, no questions asked, within five minutes.

Spiratone also sells cheaply the most complete line of photo special effects equipment I've seen anywhere. They have day-to-day enlarging paper, right angle lenses, starlike and multiple image attachments, and focal length and lens angle multipliers. Before you buy, get high, and write to Spiratone for a free catalog.

Larry Lynn  
Kington, R.I.

Spiratone, Inc.  
135-08 Northern Blvd.  
Dept. M 1  
Flushing, N.Y. 11354

354 Photography Supplies  
Communications

## The Art of Color

"If you, unknowing, are able to create masterpieces in color, then unknowing is your way. But if you are unable to create masterpieces out of your unknowing, then you ought to look for knowledge."

The same goes for seeing masterpieces. This beautifully made book is more than a text—it is a powerful tool that can help you realize the physical act of seeing as a creative act. A way to open your mind and eyes and make the connections to the world more direct and immediate. The plates are so good that there is tangible physical pleasure in seeing them. Worth the giant price if you work with color at all—worth at least a trip to the library if you don't.

[Reviewed by Terri Gunesch]



JORHANNES ITTEN: THE ART OF COLOR

The Art of Color  
Johannes Itten  
1961, 69, 1955 pp.  
\$35.00 postpaid

from:  
Van Nostrand Reinhold Company  
150 West 33rd St.  
New York, N.Y. 10001

or WHOLE EARTH CATALOG

Yellow is the most light-giving of all hues. It loses this trait the moment we shade it with gray, black or violet. Yellow is, as it were, a denser, material white. The further this yellowed light is drawn into the dimness of matter, of opacity, the more it is assimilated to yellow-orange, orange and red-orange. Our red is the stopping point of yellow, with which it is not visibly tinged. In the center of the yellow-to-red band, we have orange, as the strongest and most concentrated interpenetration of light and matter. Golden yellow suggests the highest sublimation of matter by the power of light, impossibly radiant, lacking transparency, but weightless as a pure vibration. Gold was formerly much used in painting. It signifies luminous, light-emitting matter. The golden domes of Byzantine mosaics and the backgrounds of the paintings of early masters were symbols of the beyond, the marvelous, the kingdom of sun and light. The golden aura of saints is the token of their transfiguration. The attainment of this state was conceived as an envelopment by light. This heavenly light could not be symbolized except by gold.

## Foundations of Modern Art

Full of pronouncements to make you up ("There are only three billion seconds in a century. Art? To make us forget it."). This 1931 work still serves by odd illumination. Every third pronouncement or so scratches an itch you didn't know you had. The pictures (226 of them) are splendidly peculiar—bustle, native masks, a survey of military formations, a fat body, cubist paintings, an ancient Egyptian with glasses. I don't know if the book has much to do with art; it has plenty to do with the tension of environment and anti-environment.

—SB

[Suggested by Frederick Ted Castles]



Foundations of Modern Art  
Ozenfant, Trans. by John Rodker  
1952, 347 pp.  
\$3.00 postpaid

from:  
Dover Publications, Inc.  
180 Varick Street  
New York, N.Y. 10014

or WHOLE EARTH CATALOG



The early youth of a man marked out for greatness reveals his later quality. His middle age is often characterized by work that is not truly representative, for self-criticism often obscures his natural virtues. Often works of this period, when technically he is most accomplished, mirror a malaise due to the fact that his intellect has not yet established full harmony with his instincts. The greatest works of art are those produced in the fifties. By then the master has drawn from his intellect all it can give, and is reaping the reward of his experiments. He discovers or rediscovers his own well-spring. Michael Angelo, Tintoretto, Renoir, Cezanne.

SUSPENSE

Our mind always tries to see what appears unexplained or not explained enough. It also tries to resolve the uncertainties in situations. Our mind seeks to complete the picture or to fill in the gaps. We feel the suspense, then satisfaction of completion. (Pictureman such as on a name.)



Negress seeing herself for the First Time in a Good Mirror.

## VISION & VALUE series

Design! Prestige! \$75!

Some years ago Gyorgy Kepes revolutionized the Design industry with a book called *The New Landscape*, illustrating the convergence of the scientific and artistic imagery. Since then he's been compiling a deep series of latest thought on motion, image, structure, symbol, module, so forth. It's a casket of jewels, some glass but pretty, some valuable gemstone.

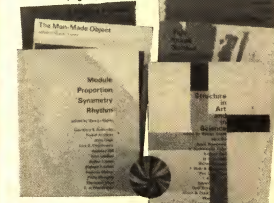
—SB

[Suggested by Len Fehkensis]

Education of Vision 1965, 233 pp. \$12.50 postpaid  
Structure in Art and in Science 1965, 186 pp. \$12.50 postpaid  
The Nature and Art of Motion 1965, 186 pp. \$12.50 postpaid  
Module Proportion Symmetry Rhythm 1966, 233 pp. \$12.50 postpaid  
The Man-Made Object 1966, 230 pp. \$12.50 postpaid  
Sign Image Symbol 1966, 281 pp. \$12.50 postpaid  
VISION & VALUE series \$75.00 postpaid

from:  
George Braziller  
1 Park Avenue  
New York, N.Y. 10016

\$10.08 each from Blackwell's  
(See page 2)



Assume for the moment that the gentleman in the bowler hat insists that he is the sole reality, while everything else appears only in his imagination. However, he cannot deny that his imaginary universe is populated with apparitions that are not unlike himself. Hence he has to grant them the privilege, that they themselves may insist that they are the sole reality and everything else is only a concoction of their imaginations. On the other hand, they cannot deny that their fantasies are populated by apparitions that are not unlike themselves, one of which may be he, the gentleman with the bowler hat.

With this the circle of contradiction is closed, for if one assumes to be the sole reality, it turns out he is the imagination of someone else who, in turn, insists that he is the sole reality.

The resolution of this paradox establishes the reality of environment through evidence of a second observer. Reality is that which can be witnessed; hence, rests on knowledge that can be shared, that is, "together-knowledge," or co-consciousness.

Heinz Von Foerster  
Sign Image Symbol



I'm awake.

And suddenly D.R. felt Emmitt in the air above him, looking down into the grave. He was flying in the cool night air, he was walking on the broken slopes above.

That's silly, D.R. thought. He's not flying. He's not walking. He's not even

He's not even Emmitt any more.

For Emmitt's lost his name now. He's gone free of names.

And in the cooling dark, feeling the walls of earth on either side, D.R. wondered what that could feel like, what it could possibly feel like to have no name.

To not be David.

To not be Collier. Or Davenport or Divine Right, or even D.R. I have no name, he thought.

No name, no name. I've joined the earth and turned to no-name stuff downhill from the bones of Royce, my father.

Father. I remember you, my father, lying through this wall of earth above my head. You played the guitar and sang and drove us around. I remember seeing you carrying groceries on your shoulder in a box, and one time on the courthouse lawn in hylan striding crackers and sandals, the two of us together. Now you are bones and I am bones, and let the dead bones lie. Old fish that used to swim here have no names. Old cows that used to pasture here forgotten, without names. And people that once lived here, Indians in the rockholes, digging hominy holes, dead, and only remnants of their living here remain, and no names. A few names fading in the headstones maybe, stone already sinking, leaning, eager to lie down. I am lying down. Down, down in Emmitt's bed, trading places with him as a wake.

In which sense reality indeed exists for a self-reflecting organism will become clear by the argument that defeats the solipsistic hypothesis. This argument proceeds by reducing ad absurdum of the thesis: this world is only in my imagination; the only reality is the imagining 'I'.



## The Natural Way to Draw

*Drawing is a deeper and wider kind of writing. It's better communication in many ways than writing, and it's much closer to your mind. (The same goes for music and speech.)*

*This classic work by an outstanding art teacher is not only the best how-to book on drawing, it is the best how-to book we've seen on any subject.*

—SB

[Suggested by Roy Seaborn]

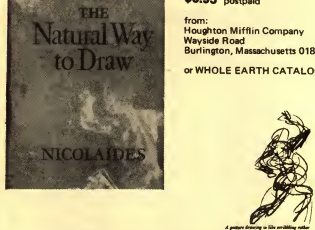
The first exercise, which you are about to attempt, is planned consciously to bring into play your sense of touch and to coordinate it with your sense of sight for the purpose of drawing.

Look at the edge of your chair. Then rub your finger against it many times, sometimes slowly and sometimes quickly. Compare the idea of the edge which the touch of your finger gives with the idea you had from merely looking at it. In this exercise you will try to combine both those experiences—that of touching with that of simply looking.

**The Natural Way to Draw**  
Kimon Nicolaides  
1941, 221 pp.

**\$6.95** postpaid

from:  
Houghton Mifflin Company  
Wayland, Massachusetts 01803  
or WHOLE EARTH CATALOG



### Exercise 1: Contour Drawing

**Materials:** Use a 3B (medium soft) drawing pencil with a very fine point (sharpened on sandpaper) and a piece of cream-colored manila wrapping paper about fifteen by twenty inches in size. Manila paper usually comes in large sheets which may be cut into four pieces of that size. You may use, also, the kind sold as "shell paper" provided it is not glazed. Fasten the paper with large paper clips to a piece of prewashed or a stiff piece of cardboard. Wear an eyeshade. Do not use an eraser until you come to Exercise 28.

Sit close to the model or object which you intend to draw and lean forward in your chair. Focus your eyes on some point—any point will do—along the contour of the model. (This contour approximates what is usually spoken of as the outline or edge.) Place the point of your pencil on the paper. Imagine that your pencil point is touching the model instead of the paper. Without taking your eyes off the model, wait until you are convinced that the pencil is touching that point on the model upon which your eyes are fastened.

Then move your eye slowly along the contour of the model and move the pencil slowly along the paper. As you do this, keep the conviction that the pencil point is actually touching the contour. Be guided more by the sense of touch than by sight. **THIS MEANS THAT YOU MUST DRAW WITHOUT LOOKING AT THE PAPER,** continuously looking at the model.

Exactly coordinate the pencil with the eye. Your eye may be tempted at first to move faster than your pencil, but do not let it get ahead. Consider only the point that you are working on at the moment with no regard for any other part of the figure.

Only in the realm of dreams has the artist found full freedom to create. I think the difference is well summed up in the anecdote about Matisse. When a lady visiting his studio said, "But surely, the arm of this woman is much too long," the artist replied politely, "Madame, you are mistaken. This is not a woman, this is a picture."



But no tradition of art had a deeper understanding of what I have called the "screen" than the art of the Far East. Chinese art theory discusses the power of expressing through absence of brush and ink. "Figures, even though painted without eyes, must seem to look; without ears, must seem to listen. . . . There are things which ten hundred brush-strokes cannot depict but which can be captured by a few simple strokes if they are right. That is truly giving expression to the invisible." (170). The maxim into which these observations were condensed might serve as a motto of this chapter: "I go on go—idea present, brush may be spared performance."

**TWO TYPES OF STUDY:** The way to learn to draw is by drawing. People who make art must not merely know about it. For an artist, the important thing is not how much he knows, but how much he can do. A scientist may know all about aerodynamics without being able to handle an airplane. It is only by flying that he can develop the sense for flying. If I were asked what one thing more than any other would teach a student how to draw, I should answer, "Drawing—intensely, furiously, painstakingly drawing."

Probably you realize already that contour drawing is of the type which is to be done "painstakingly". On the other hand, gesture drawing, which you will begin today, is to be done "furiously". In order to concentrate, one can act furiously over a short space of time, or one can work with calm determination, quietly, over a long-extended period. In learning to draw, both kinds of effort are necessary and the one makes a precise balance for the other. In long studies you will develop an understanding of the structure of the model, how it is made—by which I mean something more fundamental than anatomy alone. In quick studies you will consider the function of action, life, or expression—I call it *gesture*.

Some students become self-conscious and confused as soon as they attempt to draw a face. Don't think of the head or the face as something different from any other part of the body. Draw it as you would draw a hand or an elbow or a knee. Don't try to "get a likeness" of your model. The tendency of the beginner is to separate likenesses from drawing. Draw strangers if you can because you care less what they look like. Do not draw members of your family—or at least do not show them your drawings—because their own reaction will be to look for the likeness. Keep it clearly in mind that **YOU ARE NOT MAKING A PORTRAIT.** You are making a study of a head.



**CHANGING THE POINT OF VIEW:** It is well known that the printed or spoken word has a tendency to take on authority once it is printed or spoken. To get away from it almost takes a revolution. The same thing is true with your own drawing. The very mistakes you make, as they linger on the paper, have this tendency to become authoritative. To combat it, move about the room during the long pose, making occasional scribbled drawings. A thing is factually the same from whatever point of view you see it, but seeing it from different points of view will illuminate the meaning of the forms and lines you have been looking at.

Whenever you are uncertain as to how to begin a study think of the movement.

202 STEINBERG: From "The Passport"

Mex Friedlander tells the revealing story of the bank official who insisted that German bank notes should retain a portrait head in their design. Nothing, he said, was harder for the forger to imitate than precisely the right expression of these artificially quite insignificant heads, nor was there a quicker way of discovering a suspect note than simply observing the way these faces look at you.



Rabbit or duck?

True, we can switch from one reading to another with increasing rapidity; we will also "remember" the rabbit while we see the duck, but the more closely we watch ourselves, the more certainly we will discover that we cannot experience alternative readings at the same time. Illusion, we will find, is hard to describe or analyze, for though we may be intellectually aware of the fact that any given experience must be an illusion, we cannot, strictly speaking, give ourselves having an illusion.

## Art and Illusion

So much art criticism is so much a rapid waste of time that a book like this one is thoroughly a shock. Every page yields fresh information (did you know that the comic strip was singlehandedly invented by a Swiss pen named Töpfer in the 1820s?) and worthwhile hypotheses about how art and artists gradually teach themselves energies of effect. Furthermore the book is a bargain—it has 319 fine illustrations, 18 in color. —SB

**Art and Illusion**  
E. H. Gombrich  
1980, 1981, 466 pp.  
**\$5.95** postpaid

from:  
Princeton University Press  
Princeton, New Jersey 08540  
or WHOLE EARTH CATALOG



## Art in America

The only periodical I know that consistently makes art seem like something worth bothering with.

—SB

Art in America  
Bian O'Day, ed.  
\$15/yr (bimonthly) \$  
from:  
Art in America, Inc.  
150 East 58th St.  
New York, N.Y. 10022

### Walter Evans talking:

It's a very exciting, heady thing. It happens more when you're younger, but it still happens, or I wouldn't continue. I think there is a period of esthetic discovery that happens to a man and he can do all sorts of things at white heat. Yeats went through three periods. T.S. Eliot was strongest in his early period, I think. E.E. Cummings seemed to go on without losing much. After all, poetry is art and these fields are related. It's there and it's a mystery and it's even partly mystical and that's why it's hard to talk about in a rational pragmatic society. But art goes on. You can defend it in spite of the fact that the time is full of false art. Art schools are fostering all sorts of junk, but that's another matter. There are always a few instances of the real thing that emerge in unexpected places and you can't stop it; there it is. Even in a puritan, materialistic, middleclass, bourgeois society like America. Because the country is like that, the artist in America is commonly regarded as a sick, neurotic man. (And tends to regard himself that way.) Until recently, true art in America was sick from being neglected. Now of course it's sick the other way: too much is being made of it. The period that's just finishing, of fame and fortune for a few artists, is outrageous. It's outrageous for a few to make hundreds of thousands of dollars while a number of very good artists cannot even make a living. It makes you sick to think about it. The art world is part of our very sick society. Think of what a man of letters is in Paris or in England and what he is here. Here he's either outrageously famous and rich, or treated as less than nothing, never understood, never honestly appreciated. In those countries everyone understands that there are many excellent, poor, almost starving artists, and they are very much respected, just as old age is respected. The unappreciated artist is at once very humble and very arrogant too. He collects and edits the world about him. This is especially important in the psychology of camera work. This is why a man who has faith, intelligence and cultivation will show it in his work. Fine photography is literate, and it should be. It does reflect culture if there is cultivation. This is also why, until recently, photography has had no status, as it's usually practiced by uncultivated people. I always remember telling my classes that the student should seek to have a cultivated life and an education: they'd make better photographs. On the other hand, Eugene Atget was an uneducated man, I think, who was a kind of medium, really. He was like Blake. His work was like lightning through him. He could sense the street with his articulate it. What I've just been saying is not entirely true. Since I'm a half-educated and self-educated man, I believe in education. I do note that photography, a desired medium, is a medium that is full of empty phones and worthless commercial people. That presents quite a challenge to the man who can take delight in being in a very difficult, dismally medium.

## The Way of Chinese Painting

Chinese painters do more with brush, ink, inkstone and paper than western gadgeteers accomplish with their complicated mixing formulas, apprenticeship programs; and didactic traditions. has a lot to do with thinking simply. this book can provide you with good access to the tools and ideas of eastern brush painting. things you can carry around in your hip pocket as you move; you provide the practice.

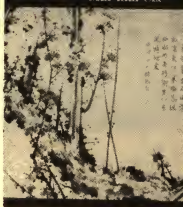
—jd

Kenneth Rexroth and Minor White had me use this as a photography book.

—SB

## The Way of Chinese Painting

Mai-mai Sze



The Way of Chinese Painting  
Mai-mai Sze  
1956, 50; 46pp.

\$1.95 postpaid

from:  
Random House, Inc.  
Westminster, Md. 21157

or WHOLE EARTH CATALOG

### Lu Ch'i says:

Among those who study painting some strive for an elaborate effect and others prefer the simple. Neither complexity in itself nor simplicity is enough. Some aim to be deft, others to be laboriously careful. Neither dexterity nor conscientiousness is enough. Some set great value on method; others pride themselves on dispensing with method. To be without method is deplorable, but to depend entirely on method is worse. You must learn first to observe the rules faithfully; afterwards, modify them according to your intelligence and capacity. The end of all method is to seem to have no method.

For good supplier of Sumi ink brushes and materials (Aiko's Art Materials Import), see p. 175.

## The Très Riches Heures of Jean, Duke of Berry

If you are at a place in your life where images can affect you, level this book at your head. It has 139 color plates, incomparable, exquisite, razor-edged. There is nothing like it in history.

—SB

## The Très Riches Heures of Jean, Duke of Berry

1485, 1969; 139 plates and text.

\$45.00 postpaid

from:  
George Braziller  
1 Park Avenue  
New York, N.Y. 10016

or WHOLE EARTH CATALOG



Turner, of course, is played by Jagger — or rather, Turner is Jagger — or rather, and much more interestingly, Turner is the future of Jagger as seen by Donald Cammell and Nicolas Roeg, the codirectors of the film, and most likely by Jagger himself. Burned to a metaphysical crisp by his years in the radioactive spotlight of pop superstardom, Turner has become a glass-eyed avatar of decayed dreams and rancid drives. He potters about his house, playing with his massive electronic equipment, exhaustedly having sex with his hip hetaira, turning on, reading Borges. Turner is a new genius — Standoff Man, a creature caught confounded between the extreme energies that dominate contemporary life. He mumbles Nietzsche and sings the blues; he swaggers with cockney machismo and paints his vulgate mouth; he gives off sparks of violence and an effluvia of terror. And all of this comes together in a brilliant passage, when he sings *Memo From J*, the ultimate Jaggeresque dithyramb, in which Turner catapults through a series of identity changes and gender blurrings, accomplished by Jagger's satanic singing and the kaleidoscopic camerawork and editing. In this Brechtian anthem Jagger becomes the cotto Lenny of our nihilist time.

## Thinking With A Pencil

This book is a good pragmatic introduction to the full range of inker presentations. Whether you plan to top Zap comics or use computer-generated diagrams to expand your intellect, these are basics you can use, if only to defend from.

—SB

[Suggested by Dave Guard]

Thinking With A Pencil  
Hanning Nelms  
\$957, 64; 348 pp.; 628 illus.

\$2.25 postpaid (Canada \$2.50)

from:  
Barnes & Noble, Inc.  
105 Fifth Avenue  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

## Thinking with a Pencil

by Hanning Nelms

How to draw with a pencil. How to draw with a pencil. How to draw with a pencil.

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Omitting the useless is as important as including the essential. Aristotle stated a fundamental truth when he said that everything which does not add will detract.

Practical drawings are mental tools. Once you have learned to make them, you will find that they are useful in solving problems as saws and hammers are useful in carpentry.



But then the night and then how soon the daylight comes, how endless are the details of the work. Busy. Busy. It's ritual time, it's tending to the dead.

D.R. rolled out of bed — Emmitt's bed, the big one he had slept in the first day he was there — at six a.m. and by six thirty he was sitting in Leonard's kitchen, his wife Roxie's kitchen, eating eggs and ham and biscuits covered by thick gravy.

This is my wife Roxie, Leonard said. This is David, Emmitt's nephew.

I'm hearing about you, said Roxie, and Leonard said you just help yourself now, David, you make yourself right at home.

D.R. etc. He ate, and ate. He ate like some great tanker taking on a load of fuel.

We've all been hearing about you, said Roxie. Ma Godsey said your coming to take care of Emmitt was a blessing from the Lord.

Ma thinks everything's a blessing from the Lord, said Leonard.



## Catalog of Art Prints

Since 1949 UNESCO has been trying to update and internationalize the world of Art Prints. They have a central archives of prints, and a committee of experts who decide which prints to include in their catalogs. The criteria are: quality of print, significance of the painter, and importance of the painting.

There are two UNESCO print catalogs: Catalogue of Colour Reproductions of Paintings Prior to 1860 and the same of paintings from 1860 to 1965. Both are understandably limited in scope by what quality prints are available, and the choice of painters and paintings is often poor. Too much trivial or repetitive work by minor painters takes the place of better paintings by major artists. The catalog does function as a useful access device, and includes reproductions of many inspired paintings, not all of which are expensive. Each entry includes the artist's name, dates, a black & white photo of the painting, its title, date, medium, size and collection in which it rests. In addition, there are lists of publishers and printers, and information on purchasing prints.

Catalogs are trilingual in French/English/Spanish and print dimensions are given in both inches and centimeters. But price conversions are not given so you must deal with each foreign price.

[Reviewed by Joe Bonner & Annie Helmuth]

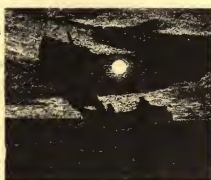
If you want good prints of Giorgione, Van der Weyden, Klee etc., see the Unesco catalogs at your library or:

Catalogue of Colour Reproductions of Paintings Prior to 1860 1968; 451 pp.

\$8.50 postpaid  
Catalogue of Colour Reproductions of Paintings 1860-1965 1968; 861 pp.

\$7.00 postpaid

both from:  
International Publications  
303 Park Avenue South  
New York, N.Y. 10010



## Painting, Technical Info

Two paperback books on painting & painting materials—economical substitutes for Meyer's books.

Painting Materials  
by Getten & Stout  
Dover Publications, N.Y. \$2.00

A Handbook on the Care of Paintings  
by Caroline K. Keck  
Watson-Guptill Publications, N.Y. \$2.00  
J.L. Boydas  
New York, N.Y.

## The Artist's Handbook of Materials & Techniques

Written in a time when "artist" meant "painter", this classic gives detailed technique on preparation of your own materials for painting.

—SB

The Artist's Handbook  
of Materials & Techniques  
Ralph Mayer  
1940, 1947; 721 pp.

\$12.50 postpaid  
from:  
The Viking Press  
625 Madison Avenue  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



These emulsions have been employed by experimental painters, but because no standard tradition has been established they must be closely observed and tested before being used, to make certain that they are homogeneous mixtures miscible with solvent and that they will dry well. The presence of finely divided pigments is helpful in the formation of water-in-oil emulsions; tube oil colors can be used in their preparation.

The presence of much turpentine in an emulsion recipe definitely favors the formation of the regular, or oil-in-water type; on the other hand, formation of the water-in-oil type can be aided by omitting all volatile solvent from the mixture. I find that whole egg gives far superior results than egg yolk, in every respect.

## Painter's Companion

After searching through all the books in libraries & bookstores on painting technique, methods & materials, & finding nothing but superficial, worldly, popularized presentations after the order of the Walter J. Foster series I decided that if I must I would put out the \$20 or \$30 necessary to buy a definitive & authoritative work on the subject. Imagine my surprise to find my very hope satisfied in a \$1.95 find! It is The Painter's Companion by Reed Kay. Published in paperback by Webb Books, Inc., Cambridge, 1961. I deal with pigments, binders & diluents, oil technique, supports & grounds, water painting, tempera, casein, encaustic, cold wax techniques, fresco painting, synthetic resin paints, pastels, glazing, has a good bibliography & addresses for supplies. It has all the formulas and step by step instructions. 264 pages. A must for anyone working in painting.

We lost her name  
Livorno American High School  
APO New York

## Utrecht Linens

Utrecht Linens Company sells oilpaints, canvas, water colors, acrylics, brushes etc. at whole sale prices. If you order more than \$50 you get further discounts, so get together with your friends and start paying those high in art supply stores. Send for a free catalogue. There are three offices, one in N.Y., one in Phila and one in Boston. I have been ordering from them, the quality is professional and the service sometimes slow with back-orders trailing 2 weeks behind the package. However, it is a good source.

Utrecht Linens Co.  
33 Thirty-fifth Street  
Brooklyn, N.Y. 11232 Minimum order \$15

[Suggested and reviewed by  
Gudrun Scott]

Utrecht finest upmott cotton duck canvases are carefully woven from 100% pure high grade cotton yarns. The surfaces are excellent to paint or stain directly with New Temp acrylic colors. They can be prepared with New Temp Gesso or in the traditional manner.



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Rhenish Red Sable Oil Color Brushes are made with exciting craftsmanship, and of carefully selected 100% pure red sables. The pure red sable hairs are strong, extra-long and of great resiliency, which makes for durability and professional quality. The brights are used for broad and smooth brush work, and for blending colors. The rounds are excellent for outlining, painting details, and fluid brush work. Seamless nickel ferrules with long black polished handles.

ROUNDS	No. 2	No. 4	No. 6	No. 8	No. 10	No. 12	No. 14	No. 16	No. 20
PER BRUSH:	44	49	55	72	92	115	135	185	275
PER DOZEN:	4.80	5.40	6.25	7.80	10.20	12.30	17.50	21.00	31.75

358 Painting Communications

## Flex Artist's Materials

All the graphics goodies. Brushes, paints, pens, inks, paper, fabric, scissors, knives, zip-a-tone, Letteraset, T-squares. Offices in Chicago, L.A., New York, San Francisco. Minimum order \$5.

—SB

[Suggested by Michael R. Menkin]

Flex's  
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All-Purpose Shears: Inlaid blades, enameled handles, nickel plated blades.

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#141-17 39" 9" (with adjustable nut) 7.25

YARDSTICK COMPASS #108: Pivot point and lead-holder fit over wood yardstick. Easily and accurately adjusted. Takes cutting blade 24 E.

Flex No.

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## Dick Blick

Another mailorder art supplier. Geared to schools.

—SB

[Suggested by Samuel Scharf]

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Galesburg, Illinois 61401

Standard Rapidograph  
Technical Fountain Pen

Non-bleeding, always draws constant wide line with regular drawing ink; automatic filling system. Excellent for technical, mechanical, drafting, fine and commercial arts, music, lettering and general writing.

RAPIDOGRAPH with T of 7 Points  
Size choice: 02 01 2 26 3 4  
B-4950 Shop 3000 Shop 6 oz/ \$4.70 Ds/ \$9.90



Longwood  
Portable  
Easel

8-8472  
12 or more  
\$13.90  
Each  
Shop 13 lbs each

8-8472 LONGWOOD  
Each Easel . . . . . \$16.90  
2 to 11 Easels . . . . . Each 15.90  
\*12 or more Easels . . . . . 13.90  
\*Shop 13 lbs each  
\*FOB Glendale, New York



RAPIDOGRAPH with 000 Superfine Point  
B-4960 Shop 11 8 oz/ \$5.50 Ds/ \$9.50  
Rapidograph Replacement Points  
Size choice: 1 Fine 3 Broad  
00 Extra Extra Fine 2 Medium 4 Extra  
0 Extra Fine 2 Medium 12 Wide broad 4 Broad  
B-4953 (For 6.7) Shop 4 oz/ \$2.30 Ds/ \$2.00  
000 Superfine Replacement Point  
B-4956 Shop 11 4 oz/ \$3.20 Ds/ \$2.90

## Silk Screen Books

Two excellent books for beginners and journeymen silk-screeners

I like best:

57 How-to-do-it Charts  
by Harry L. Hiett (\$2.00)

63 pp. 8-1/2 x 2 x 11 "Gives you a quick breakdown, in chart form, of all the necessary steps for making frames, producing your own films, and building your own basic equipment. Shows you how to stretch your silk, both by rope & by tacking method, & how to build grids for 3-dimensional printing. A practical book for the professional, the student, or the technician."

The supply outlet likes best:

Silk Screen Printing  
by Eisenberg & Kahn (\$2.20)

90 pp., 18 chapters. "Devoted to describing each phase of screen processing clearly w/ illustrations & photographs. Step-by-step suggestions on techniques & methods, cleaning of equipment, color mixing, art & lettering, multi-color screening, etc. Recommended handbook for beginners."

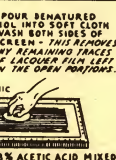
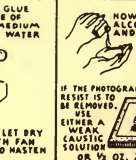
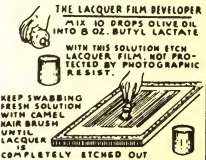
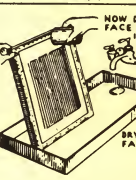
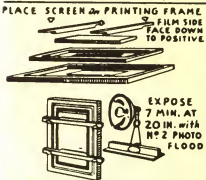
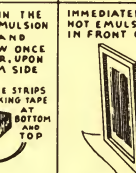
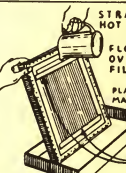
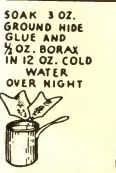
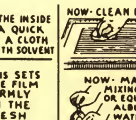
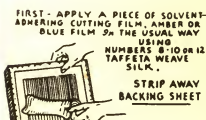
The prices are so reasonable, for a welcome change, I really advise getting both. My source, get their giant catalog, too, is:

WESTERN Sign Supplier, Inc.  
77 8th St.  
Oakland, Calif. 94607

57 How-to-do-it Charts also available from:

Signs of the Times Publishing Co.  
407 Gilbert Ave.  
Cincinnati, Ohio 45202

57 How-to-do-it Charts +



Further Silk Screen  
There's a good British book:

Practical Screen Printing  
Stephen Russ  
1969; 96 pp.  
\$8.50 postpaid

from:  
Watson-Guptill Publications  
165 West 46th St.  
New York, N.Y. 10036

## Naz-Dar Silk Screen Materials

Probably the most complete source of screen processing materials for printing on almost everything but soft butter. While intended primarily for the commercial market, Naz-Dar's catalogue will give you an insight into this practically unlimited medium.

[Reviewed by Carl Mueller.  
Suggested by Jerome Skuba]

The Naz-Dar Company  
1087 N. North Branch Street  
Chicago, Ill. 60622

### Silk Screen Printing

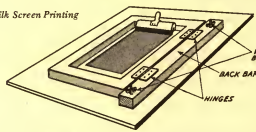
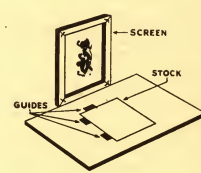


Fig. 41. Back Bar Fastened With Wing Nuts

### Problems Answered

The film refuses to adhere to the silk.  
The silk was not washed with both solvent and water before use. Insufficient solvent is used during adhering operation.

The film buckles while cutting.  
There is an excessive humidity, hence the work must be handled rapidly and not allowed to stand around too long before adhering.



No. 5100 Complete Squeeze, Black Rubber, Medium Grade	\$2.70	Per Inch
No. 5102 Black Rubber only	.15	
No. 5150 Complete Squeeze, Gray Rubber, Hard Grade	.20	
No. 5151 Gray Rubber only	.15	
No. 5200 Complete Squeeze, Amber Rubber, Soft Grade	.20	
No. 5202 Amber Rubber only	.15	
No. 5420 Complete Squeeze, Extra Hard Grade	.20	
No. 5421 Rubber only	.15	

### STENCRAFT STENCIL SILK (Price per Yard)

number	Mesh	Count	Width	1-14	15-29	30
6xx	70	40"	\$3.45	\$2.20	\$3.00	
8xx	86	40"	3.60	2.35	3.10	
10xx	107	40"	4.00	2.70	3.45	
12xx	125	40"	4.25	2.95	3.65	
14xx	139	40"	4.55	3.20	3.90	
16xx	156	40"	5.60	5.20	4.85	



Leonard was putting on a tie. He looked strange in a suit, and yet it belonged on him too. He was tall and round, big-boned and lean, a powerful man. Leonard was in his fifties, he was a grandfather as a matter of fact. But nobody ever deferred to him because of it. People deferred to him but it wasn't because they thought he was old or beyond his prime. He was right in his prime, and so was Roxie. Roxie was large and getting round, but she was some years younger than Leonard, barely forty. Their children were grown, most of them already married, living away in Indiana and Illinois. Their youngest son Glenn had left home just the year before. He was in the Army, over in Vietnam now. Leonard showed D.R. his picture when D.R. went in the bedroom to try on Glenn's graduation suit.

A perfect fit.  
Close to it, anyhow.  
Why yes, said Roxie. That suit looks fine on you.

And Leonard and D.R. went up to the church to talk to Reverend Bagby about the service.

Reverend Bagby had it all planned. Mrs. Thornton's niece Dorothy had agreed to sign Abbie With Me, and Bagby would play the piano. The message would be short, said Reverend Bagby. It was hot, and there was the work of getting the carpet up on the hill to bury. It all sounded fine to D.R. He liked Reverend Bagby. He liked Mrs. Bagby. He liked Leonard and he liked Roxie. D.R. tried to hide it or best he could, but the truth of the matter was, he was really enjoying this day so far.

And then there Marcella was to help him enjoy it more.

How good, just plain good it was to see her. And Doyle and Herschel and little Dabbie, my what a pretty family. Doyle grabbed D.R.'s hand and shook it as Marcella gave him a powerful hug, and Herschel began tugging at his coat pocket. Dabbie hung back, and D.R. lifted her into the air as a reward for being demure. Lift! Lift! Lift! Marcella shouted, and Doyle took him by the hand and led him off to one side to explain why he ought not be yanking like that. Leonard stood among them as a greaser. It was proper that he do so. Everybody felt it, and in their separate ways they thanked him for it. Doyle held his hand out to Leonard and said you may not remember me, Leonard, but I'm Doyle. Leonard said why Doyle, I remember you good. You fixed a car of mine one time, a Mercury, back in the days when I drove Mercurys, don't you remember that? Doyle took a little puzzled, then embarrassed. Now I'll plumb forget about that, said Doyle. A car? A car? Put a new coil in it for you, down there by your elf's store.

And a good expensive American book with a full list of suppliers and annotated bibliography:

Screen Printing  
J.I. Bieglehouse  
1971; 159 pp.  
\$12.50 postpaid

from:  
Watson-Guptill Publications  
165 West 46th St.  
New York, N.Y. 10036



## Printers' Supply Book

A look at the Whole Earth Catalogue or any other piece of printing (especially "Movement" stuff) confirms that the items sold by the Kelsey Co. are obsolete—today good, cheap quick printing is done off-set. And Kelsey sells only letterpress equipment. But they have a full line—everything. Good and reasonably priced.

For the holdout who still prints letterpress and wants to make some cash from stationary, business cards, billheads, invitations and announcements or just fiddle in the basement, Kelsey has the supplies. I wouldn't suggest buying a hand press from them. They are costly, especially since good used Chandler and Price or other motor-driven hand fed presses can be gotten cheaply. But they do sell all kinds of paper and will custom cut. This is a help to the person who is not employed at a printing office where he can get cut-outs or paper at cost. And they have the whole range of equipment—bodkins, line gages, composing sticks, type cases and stands, galleys, quills, furniture, registers—the works. A nice range of inks is listed, and they are ready to answer your letter about inking problems.

Their types cover a wide range. The job printing standards are all there—Copperplate and Bond Gothics; Caslon, Goudy, Caramond; Egyptians; and the whole mess of ugly curves you need to do social stationery for your aunt. Several are worthy of note. Steelplate Shaded is one. There isn't much use for this, but it is well-designed and time-looking. A rather mundane range of sans-serif wood type is listed. Two lines of type are sold—New England and Connecticut. With the Connecticut line (more expensive) spaces and quads are included. Fonts are sold in regular, large or all cap.

Service reputed to be good to East Coast. Can't say about other areas.

Will Powers  
RFD 2  
Lancaster, New Hampshire  
03584

## Printers' Supply Book

\$35 (refunded with first order)

from:  
The Kelsey Company  
Meriden, Connecticut 06450

**Bodkin**, tempered steel with handle, 30  
Ship. Wgt. per bodkin, 3¢ pound



Useful when setting or making up forms, especially forms which are too large to go in the composing stick. Also to build forms that you want to keep set. **Barstow Steel.**  
From actual experience in our printing department we find these the most practical sizes:  
6 x 10 inches, Ship. Wgt. 1 lb. .78  
8 1/2 x 13 " " " 1.05  
10 x 18 " " " 1.65



**Line Gage**, for all printers' measurement is made from heavy polished metal—very sharp and easy to read, graduated in 1/16 inch (12 points) and to 1/8 inch (24 points), and on the other edge to inches. No. 2, 12 inch. 1.65

## STEELPLATE SHADED

No. 6011 6 Point 10A 50.00—1A 10.00  
WITH THIS STEELPLATE SHAD-  
No. 6012 8 Point 10A 50.00—1A 10.00  
AT 10 POINTS PER LINE 6 7/8  
No. 6013 8 Point 10A 50.00—1A 10.00  
USING LITTLE INK AND 12  
No. 1214 12 Point 10A 50.00—1A 10.00

**ADD SOME BLUE**  
No. 1215 12 Point 7A 10.00  
**GRAY LOOK 5**  
No. 1216 12 Point 7A 10.00  
**USE WITH 8**  
ABCDEFGHIJKLMN  
OPQRSTUVWXYZ, ., : , - , \* ,  
1234567890

**QUINOS**—to lock forms in chase. (C)

Kelsey, the most popular of all quins, set of two, each half dozen sets, 2.30  
For don't sets, .45  
Kelsey Key Wrench, 1.45

**COMPOSING STICKS** (C)

**Excellent job, new improved model.**  
1/8 inch, (Capacity 36 pieces) 3.85  
Shipping 3¢ each, 1 pound

T. N. Lawrence

English engraver's tools and supplies.

—58

T.N. Lawrence and Son  
Catalog March 1970

from:  
T.N. Lawrence and Son Limited  
2-4 Blenheim Heart Yard  
Greville Street, Hutton Garden,  
London, E.C.3, England



REST ON BACK  
WHEN NOT IN  
USE



Rollers, Soft Plastic, Transparent.

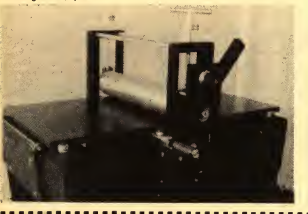
## TOOLS for ENGRAVING

Gravers Lozenge	several sizes .. ..	7/- each
" Square .. ..		7/- "
Spitstickers, Fine, Medium, Broad		7/- "
Scorpers, round, Nos. 1-12		7/- "
" square, Nos. 1-12		7/- "
Tint Tools, Nos. 1-6		7/- "
Bullstickers, 3 sizes		7/- "

## Fox Etching Press

I think that the equipment about which I am sending you information will surely interest a certain subset of your readers, namely, perishing artists and printmakers. The FOX I LE VIGATOR is a unique stonegrinder, the FOX I ETCHING PRESS is far more portable, versatile and by far less expensive than any comparable professional etching press in the field. (Its closest competitor costs \$500 more.)

Carlos Joly  
Fox Graphics  
Back Bay Annex  
Box 328  
Boston, Mass. 02116  
Levigator \$1,200  
Etching Press \$1,200



## Parchment

The William Cowley Parchment Works, Newport Pagnell, Bucks, England, supplies Sheepskin Parchment & Calfskin vellum for about 1.24 to 2.5¢ a square inch. This is 1/2 to 1/3 less than anything I have found in the US, & the quality is extremely fine.

Richard F. Wheeler  
Portland, Oregon

## Graphic Chemical & Ink

The best place and the cheapest to get printmaking (lithography, etching, etc.) supplies.  
They supply schools and colleges around the country, also art supply stores which mark everything up 1000% or so.  
What they sell is everything from Korn's litho crayons, Arches paper, and Sennelier's Asphaltum to a \$1000 Dickerson combination press.  
Most of their orders are filled through the mail and are pretty big. We went out on a Saturday and purchased a staggering \$300 worth of supplies, but they treated us like fuckin' kings, man and showed us all over the plant, where they do everything: they make their own inks from raw pigment, they manufacture or at least assemble their own presses, but most of all they seem to dig on showing people around. We spent at least an hour just feeling all the different kinds of paper one extremely nice dude showed us.

[Suggested and reviewed by  
Betsy and Ralph]

Graphic Chemical & Ink Company  
728 N. Yale Avenue  
P.O. Box 27  
Villa Park, Illinois 60181



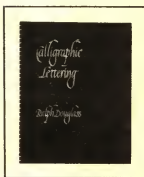
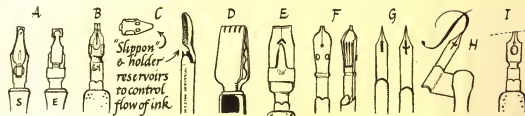
## Tools

Etching Point, all metal, double end.....	1.35
Litho Needle, 7" long, wooden handle.....	1.35
Carbide-tipped Point, suitable for dry-point work .....	1.40
No. 787 Double-End Pin Vise, carbide and steel tips .....	3.05
Diamond Point for No. 787 .....	8.50
Lithographer's Etching Diamond:	
No. 49-B .....	15.00
No. 49-C .....	18.00
No. 49-D .....	22.00
Diamonds are not to be used on glass. For some reason they invariably break. We also have the "Lancer" diamond point that is set in a ball point pen barrel.	
Lancer Retractable Diamond Point .....	6.50
Needle Burnisher (combination burnisher and etching needle) .....	2.35
Burnisher, tempered blade, wooden handle, Straight, 3" blade .....	1.60
Bent, 3 1/2" blade .....	1.60
Straight, Triangular, 5 1/2" blade .....	1.40
Bent, Fine, 3 1/2" blade .....	1.50
Scraper, 3-square hollow, wooden handle .....	1.85
3-square flat, wooden handle .....	1.85
Burins, Straight or Bent, wooden handle	
Squares and Lozenges:	
No. 2, 4, 6, 8 .....	1.35
No. 10, 12 .....	1.40
Knife, No. 1, 3, 5, 7 .....	1.25
Lining tool, 2-line, 4-line, 6-line .....	2.75
Chisel, No. 0, 1, 2, 3 .....	1.20
Scorpers (round), No. 53, 57, 60 .....	1.30
Flats, No. 38, 42, 46 .....	1.30
Elliptic Tint Tool, No. 2, 4, 6 .....	1.75
Burins, Boxed Set .....	44.00
Handles, alone, each .....	25.00
Mozzafino Rocker .....	6.50
Roulette .....	8.75
Copper Cutter, Draw-Type .....	4.75
Sharpening Jig .....	4.75
India Sharpening Stone, 18-64 .....	3.50

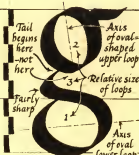
## Calligraphic Lettering with wide pen and brush

calligraphic lettering, by ralph douglass, presents a lot of different forms of lettering: italic, chancery cursive, english roundhand, spanish gothic, etc., but it's up to you to do them right. he just shows you what the letters should look like.

(Suggested by Carpy McClure  
Reviewed by Ruth Wyant)



Get the 'O' ROUND -  
so: ○ not so: ○  
Do NOT move the first stroke  
- swing it back down  
Then begin in the web - and finish the job



## Calligraphic Lettering with wide pen and brush

Ralph Douglas  
1949, 68, 111 pp.

\$5.95 postpaid

from:  
Watson-Guptill Publications  
165 West 46th Street  
New York, New York 10036  
or WHOLE EARTH CATALOG

## A Study of Writing

Not as good as it should be, this is still the best introduction around to the growth and diffusion of language notation systems.

-SB

## A Study of Writing

J. J. Galt  
1952; 319 pp.

\$2.95  
postpaid

from:  
University of  
Chicago  
Press  
5801 Ellis Ave.  
Chicago, Ill.  
60637

or WHOLE  
EARTH  
CATALOG

Colour does not seem to play an important role in our modern writing. Although colouring schemes are occasionally used to differentiate meaning, as in charts, it is normally the black or dark colour that predominates, whether in our handwriting or book print. In older times, when all writing was done by hand, colour differentiation was found more frequently. Both the old Mexican writings and the more modern writings of the American Indians frequently employ a method of colouring the signs. Among the Cherokee Indians white colour was used for peace or happiness, black for death, red for success or triumph, blue for defeat or trouble.



The retrograde evolution of individual writings was frequently facilitated whenever they fell under the control of a priestly or political caste. In such cases the systems gradually became so overburdened with various artificial and baroque deflections that they grew too difficult for large masses of people to master. The final result of such degenerated writing was frequently its total rejection by the people and its replacement by an entirely new system introduced from abroad.

## Hand Bookbinding

There's hardly anybody around nowadays who can teach you how to bind books. Hand bookbinding is a fairly simple process that requires patience and the art of pain-taking. Although machines long ago took over the commercial phase of binding, good hand-binding are still stronger and more durable, and almost always more beautiful.

I took a course in hand bookbinding at San Francisco State College from Dr. Green, a cantankerous craftsman who would scold, cajole, and insult us into taking time for details and caring about the work enough to redo it two or three times until it was perfect. While that kind of discipline isn't in this book, the basic processes are clearly described and illustrated with lucid drawings by the author himself.

Principles of bookbinding have scarcely changed at all in the 1,800 years since Roman scrolls got cut up into pages, sewn together in signatures and bound between boards wrapped in leather. Most of today's books are constructed in exactly the same way. Watson presents these techniques in a series of projects, starting with an easy desk jacket and ending with slipcases - to me, one of the most difficult jobs, requiring absolute precision measurements. The first binding project is a simple one - signature book with paper covers. The most fun projects are the blank books - which make perfect journals or gifts for friends - and repairing and rebuilding old books (when word gets around that you're into bookbinding, your friends will bring you all kinds of favorite dog-eared volumes, coverless and tattered and worn out from countless re-readings.)

Watson also covers handmade headbands and has a whole chapter on making your own tools and equipment, like awls, sewing frames and presses.

-Hal Herzog  
(Suggested by John Meisner)

## Hand Bookbinding

Adrian A. Watson  
1963; 93 pp.

\$3.25 postpaid

from:  
Crown Publishers, Inc.  
413 Park Ave., South  
New York, N.Y. 10016



And the mention of the store caused Marcella to interrupt and ask Leonard how his mother was.

She didn't change, said Leonard. I swear, she ain't a bit different than when you all use to live here, Marcella.

Well, said Marcella, I've been talking to her on the phone, but it's been so long since I've seen her.

She'll be to the church after while, Leonard said. And she'll be glad to see you all.

Then there she was, old Mrs. Godsey, with a hat on now, a great, white vanda-brimmed hat, and a kind of cream-colored dress that reached to her ankles nearly. Her daughter-in-law Roxie was walking with her, holding her by the arm. But when she saw Marcella the old woman moved out by herself and walked toward Marcella with her arm stretched out, to shake hands. Only instead of shaking hands she hugged her, and the two women pressed their cheeks together briefly, then stood back to look at one another.

And these are my children, said Marcella. This is Debbie. And that's Herschel. Herschel, come and say hello to Mrs. Godsey. She's an old neighbor-friend of ours.

D.R. said, Mrs. Godsey knew your mother when she wasn't as old as you are, Herschel. What do you think about that?

Herschel didn't think much about it one way or another, but he shook hands anyway, and then retreated behind his father.

And then they got to talking about Emmet, how he died, and D.R. being there with him.

He wouldn't go to the hospital for me, said Leonard. I argued with Emmet a month to go to the doctor.

And then here comes this boy and packs him off the first day, said Mrs. Godsey, patting D.R. on the shoulder.

He didn't like it one bit either, said D.R. He cussed me and Leonard all the way to Blaine, and up two flights of stairs.

It had to be done though, said Leonard. It just had to be done.

## Italimuse

The esoteric art of calligraphy is the subject of the *Italimuse*, a sporadic publication issued by Italimuse, Inc., which also offers a large selection of books on all types of calligraphy and calligraphic supplies. Their Guide to Italic Handwriting is a well-written introduction to that particular form of handwriting.

Ron Goldstein  
Oxford, Pennsylvania

Italimuse, Inc.  
Grand Island  
New York 14072

## You, Too, Can Write Legibly

### Short-Cut Shorthand

Writing is slower than talking, and thereby hangs a lot of problems. If you need to write fast you have approximately three choices of method. Gregg (the fastest, but really hard to learn), Speedwriting (slowest, a cinch to learn), and this (medium fast, medium easy to learn). The book is well designed for self-teaching.

-SB

### Short-Cut Shorthand

S. M. Wesley

1966; 275 pp.

\$3.95 postpaid

from:  
Cowles Education Corporation  
488 Madison Avenue  
New York, N.Y. 10022

or WHOLE EARTH CATALOG



PHONETIC SYSTEM. Unlike other shorthand systems, Short-Cut Shorthand follows a purely phonetic system. It has no hieroglyphic-like forms or subtle differences in lines that need to be learned and interpreted. The forms are distinctive and clear cut. Once you learn the character for a particular sound you continue to use it throughout. You just write down what you hear.



## Bookmaking

A textbook for book designers.

Should enable anyone from author to customer to communicate intelligently about any aspect of the design or production of a book. Probably the only existent reference for someone who needs to deal with printers and publishers, and isn't quite sure he knows an offset from a castoff. Perhaps the best thing that can be said about this book is that it is beautifully designed, but by the time you finish reading it you'll probably know enough to start criticizing its design. —SB

### Bookmaking

Marshall Lee  
1966; 399 pp.

\$12.75 postpaid

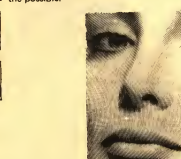
from:  
R. R. Bowker Company  
1180 Avenue of the Americas  
New York, N. Y. 10036  
or WHOLE EARTH CATALOG

To reconcile the sometimes divergent needs of the various aspects of bookmaking, decide first on what should be done creatively, then modify these decisions as necessary to accommodate the practical considerations. In other words, plan the ideal first and retain as much of it as you can. This works better than any other procedure because the creative process functions best when it is free of practical considerations. The moment you accept mechanical or economic limitations, your imagination tends to freeze. Not that it merely restricts itself to the practicable—it tends to act as though the limiting walls were made of glass, and it swings in a cramped arc far short of those walls. This is a safe enough procedure, but it precludes any chance of extending the possible.

Illustrations  
scattered through text.



Four kinds of development in sequence



Circular screen

Electra Italic  
[Oblique]  
Electra Cursive

Janson Janson  
Baskerville Baskerville  
Caslon Caslon  
Gronjón Gronjón

Spartan  
Metro  
Etrus Light Condensed  
Optima  
News Gothic  
Vogue  
Slate Condensed No. 2  
GOTHIC NO. 31  
Memphis  
Caïro

## PROOFREADERS' MARKS

Marginal sign	Mark in text	Meaning	Corrected text
3	Proofreading	Delete, take out letter or word	Proofreading
⑤	Legibility is the requirement of a proofreader's marks.	Delete and close up	Legibility is the first requirement of a proofreader's marks.
first	Symbols should be made neatly and	Insert marginal addition	Symbols should be made neatly and
○		Close up entirely	
⌋		Less space	
⌋		Push space down to avoid printing	
#	in line with the "text" to which they refer.	Add space	in line with the text to which they refer.
sq. #	Place marks carefully.	Space evenly	
¶	Paragraphs may be	New paragraph	Place marks carefully. Paragraphs may be
no ¶		No new paragraph	

The readability of a page is effected by no less than 9 factors:

- typeface,
- size of type,
- length of line,
- leading,
- page pattern (which includes "margins"),
- contrast of type and paper (which includes color),
- texture of paper,
- typographic relationships (heads, folios, etc.), and
- suitability to layout.

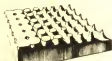
Color has 3 aspects: (a) hue, (b) intensity, and (c) value.

Hue—This is the 'color' of the color (red, blue, yellow, green, orange-red, etc.).  
Intensity—This is the purity of the color (intensity is lowered as the color is grayed or 'softened').

Value—This is the darkness of the color (even in pure primary colors there is variation in value—yellow is lighter than blue, blue is lighter than red, etc.; however, an intense yellow may be darker than a blue whose intensity (and value) has been lowered by the addition of white).

There are many considerations involved in matching printer to job, but the main ones are:

- the kind of presses he has (letterpress, offset lithography, gravure),
- the size presses he has,
- the number of presses he has (this relates to capacity to produce),
- the kind of work he has done,
- the quality of his work,
- his schedule, and
- his prices.



## Advertising Graphics

Who wants to make a book of just type and a few clunky illustrations? (If you do, see Bookmaking, above.) A richer palette is offered, and well described, by Advertising Graphics. Drawing, rendering, indication, type, layout, and on through the production process. McLuhan says that ads are good news. Since good news is boring, it's put the burden on advertisers to acid-coat their sugar pill. If we'd had this book back at our beginning, I suspect our \$1 Catalogue would be a lot livelier to look at. —SB

[Suggested by Stephen Sulka]



Windowing. If your ad includes a few rectangular half-tones either same size or reductions, rectangles of black or the red artist aid can be pasted in position on the black plate or base of the pastup. When the black (line) copy is shot, the rectangles will appear as transparent windows in the black negative. After the half-tones are shot they can be positioned under these windows and burned into the printing plate right with the line work. Of course if the half-tones are to be reduced, the artist must figure the scaling to make certain the width and length of the pasted rectangles are proportional to the reduced half-tone area. Using a mechanical scaler is one of the quickest ways to do this.

KEEP BLACK AT LOW ANGLE TO PREVENT CRATERING



### Advertising Graphics

H. William Books, Jr.  
1969; 261 pp.

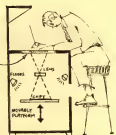
\$6.95 postpaid

from:  
The Macmillan Company  
Front and Brown Streets  
Riverside, Burlington County  
New Jersey 08075

or WHOLE EARTH CATALOG

### ADVERTISING

graphics



A Lucy (Camera Lucida) is another device for proportioning—enlarging or reducing on a ground glass plate. The artist or stripper can then trace, draw, or measure from the image.

Cut out your initial or a symbol from a block of wood or art gum. ERASER. USE IT TO STAMP YOUR PRINTS OR STATIONERY AS YOUR IDENTIFYING "CHOP."



## INDICATION

The layout artist must be able to indicate or simulate typography, lettering, and the human figure quickly and clearly.

Type is usually indicated by using chisel-point pencils of varying width.

Also check out Basic Graphics (p. 321).

## Underground Press Syndicate

1. We, The Free Ranger Tribe, have published this booklet called, "How To Publish Your Very Own Underground Newspaper", which contains just about all the basic information you need, such as—printing, type setting, layout, advertising, subscriptions, distribution, mailing, the police, etc. It is distributed through the Underground Press Syndicate, Box 26, Village Station, New York, New York 10014. It is a compendium of other, many books, on the subject plus the combined experience of the Underground Press Syndicate. \$1.

2. Enclosed is a list of all the Underground Press Syndicate papers, their addresses, and subscription rates. I can't imagine why this has never been run before in the Catalog since this is one of the most basic things for people to plug into. Not only for subscriptions but to advertise in, to send out information and publicity to and to obtain papers for distribution. An updated list is published periodically, available from U.P.S. A quarter and a self-addressed, stamped envelope would be nice.

3. The Free Ranger Tribe publishes the U.P.S. Directory which lists papers, editors, addresses, phone numbers, advertising rates, advertising deadlines, copy deadlines, mechanical specifications, subscription rates, bulk rates, etc. \$2.00 from U.P.S.

## Writing and Illuminating and Lettering

Publish your own book and let the New York madness go choke. Photo offset newspaper is incredibly cheap. To make up CATALOG pages we spent \$150 a month for an IBM selective composer and \$850 for a Polaroid MP-3 camera with half-tone kit, and that's high-rent. With this \$7 book and loving care you could hand-make a publication more personal than speech.

[Suggested by Richard F. Wheeler]

Laying & Burnishing Gold

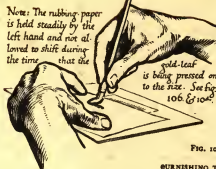


FIG. 107.

BURNISHING THE GOLD

Writing and Illuminating and Lettering  
Edward Johnston  
1906... 1969; 439 pp.

\$6.95 postpaid

from:  
Pitman Publishing Corporation  
P.O. Box 438 St.  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

\$4.20 from Blackwell's (see p. 79)

## Printing Up The Revolution

An outline for a handbook instructing those who need printing done inexpensively and who want to do as much of the work as possible themselves. The manual deals mainly with printing on small offset presses, and particularly with methods of preparing paste-ups for offset printing. The stress throughout is on saving money without losing quality, and on building equipment and using hand work to use on the high costs of machinery and labor. Also included is a brief survey of movement printers in the San Francisco Bay Area, and their approach to these problems.

1/Books. The kinds of printing that might be needed, and that this book will deal with (flyleafs, pamphlets, posters, etc.). Terminology. How to recognize possibilities. Content and intended use determine form. Strengthening the finished product will be used for. Design.

2/Process. Offset printing in general, and the small offset duplicator in particular, as the most convenient and cheapest method for most work. The mimeograph machine, its possibilities and limitations. Direct electronic streaming. The use of the mimeograph (letterpress) (more to come under "starting a shop").

3/Camera ready copy. Advancing the notion that a tremendous amount of money and time can be saved by preparing good pasteups, and by learning tricks that can be done at the paste-up stage rather than by highly paid printers and camera men. Explanation of the nature of "photo" "offset" and the need for care and patience in producing the original, camera ready copy.

4/Materials and Equipment. Setting up a paste-up shop. What you can build; what you have to buy. The IBM typewriter. Art-type and related transfer lettering. Typewriter correction technique and materials. General paste-up techniques and materials. Comparison of various pasting materials—rubber cement, wax, spray adhesive, etc.

5/Aspects of the Paste-Up. The problem of photographs. Multi-color separations. Pasteup niches, such as Broadway, accent, reserves, white lettering, etc. The use of line drawings for inexpensive art work. Advanced equipment, such as the IBM Composer, headliner, Verityper, etc. Justified margins versus ragged.

6/Aspects of the Paste-Up 2. Fine points. The use of ruling pens, rapidograph pens, sign pens, and their possibilities. Calligraphy as an innovative and inexpensive way to do titles and headlines. Lifting printed work, starting a clip file, and recognizing problems in using printed work.

7/Paper and Ink. The right colored paper can salvage a pedestrian layout. The color ink can make it exciting. Buying paper. The understanding of paper sizes and cutting. Avoiding waste, and the use for waste papers. The cheapest paper is not always the best. The PMS ink color system, and how and why to use it. Printing second color printing. Color ink versus color paper.

8/Binding. An area in which all time and no money can be an advantage. The reasons for not owning bindery equipment. Small offset folding machines, staplers, collators, etc. Methods. How to use a pamphlet by hand, and decorative possibilities. How to dress up stapled pamphlets. Perfect binding, spiral binding, etc.

9/Planning Print. How to talk to printers. Know what you need, and what is possible. "Instant" printing franchise shops and how they work—why they are cheap and how to prepare for them. Rough sketches. Copy fitting. The preparation of copy for type-setting. Let your printer suggest possibilities. More designing. Printing is Practical.

10/Starting Your Own Shop. The camera as the basis of offset printing, and why it is more important to own a camera than a press. The homemade camera. Other homemade offset equipment, as seen in working shops in the Bay Area. What to look for in buying offset presses. The possibilities and economics of letterpress. Relative costs and capabilities. Sources of supply. Suppliers as sources of information.

Included within the book will be information about the availability and prices of equipment and materials, as well as rough prices for building certain pieces. These costs of course will apply primarily to the Bay Area, though an attempt will be made to include some regional comparisons.

Clifford Burke has been in the editing/designing/printing/publishing business for just over ten years. He started Camera Press in the Haight Ashbury district in 1966, and his experience includes working as printer for the Association for the Study of San Francisco State College just prior to the Black Student Union strike in 1968. He now works primarily as a book designer and printer, and operates a casual typographic beer drinking scene on Saturdays.

Printing Up The Revolution will be published in October, 1971, and will sell for approximately \$3.00. It will be illustrated by Chuck Miller, and will contain approx. 128 pages.

Inquiries to:  
Granum Press  
243 Collins St.  
San Francisco, CA 94118

## OF QUILLS GENERALLY

For ordinary use the nib may be cut with a fairly steep angle, as shown (magnified) at a, fig. 36.

But it is better for all careful work and fine, sharp writing that the angle be made very sharp: the knife blade is laid back (much flatter than is shown in fig. 29) and the quill is cut quite thin; the knife blade is then held vertical and the extreme tip of the nib is cut off sharp and true (4, fig. 36).

For large writing in a rough style, the nib may be cut with a flatter angle, as shown (magnified) at a, fig. 36.

For very fine work, the nib may be cut with a sharper angle, as shown (magnified) at a, fig. 36.

For large writing in a rough style, the nib may be cut with a flatter angle, as shown (magnified) at a, fig. 36.

For very fine work, the nib may be cut with a sharper angle, as shown (magnified) at a, fig. 36.

For large writing in a rough style, the nib may be cut with a flatter angle, as shown (magnified) at a, fig. 36.

For very fine work, the nib may be cut with a sharper angle, as shown (magnified) at a, fig. 36.

## Printing as a Hobby

Most books that deal with printing are of a highly technical nature; aimed at the professional printer, or someone aspiring to be one. This book, on the other hand, is aimed specifically at the beginner with very little money. With this book and \$10 you can set up your own private print shop. And if you want to graduate later to a small printing press, Mr. Lieberman explains the processes involved with that also.

[Suggested and reviewed by Lloyd Martin]

Printing as a Hobby  
J. Ben Lieberman  
1963; 128 pp.



The easiest way to buy materials, therefore, is to write for the catalogue and type and paper-stock sample books of Popular Printing, Inc., 1010 South Main Street, Evansville, 14, Indiana, U.S.A. (It has, among other kits, a special \$10 starter kit [as of 1963] which includes all needed items which you cannot make or find around the house.)

Printing as a Hobby  
J. Ben Lieberman  
1963; 128 pp.

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1963; 128 pp.

## Printing With the Handpress

A beautiful explicit book on how to hand-print beautiful books. Seeing the book makes you want to do it, and the contents can indeed get you there.

—SB

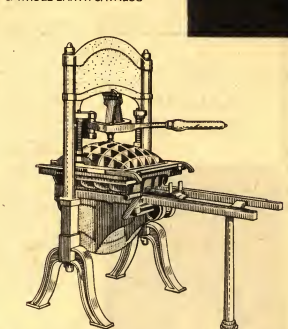
## Printing With the Handpress

Lewis M. Allen  
1969; 78 pp.

\$9.95 postpaid

from:  
Van Nostrand-Reinhold Books,  
450 W. 33rd St.  
New York, N.Y. 10001

or WHOLE EARTH CATALOG



THE WASHINGTON. The final statement in the development of the handpress. Manufactured in the United States from 1812 through 1900, thousands were produced, but today they are rather difficult to find.

Introduction. This manual is for serious amateurs and potential professionals who wish to operate a handpress easily but expertly. However, we will not discuss in detail operations which are basic to all forms of printing—such as design, typesetting, make-ready, binding. There are many competent books on these subjects—see the Bibliography.

One of the supreme pleasures available to men is knowledge, discipline, intelligence guiding the hand to create beautiful and intellectually desirable objects. This human and consequently expressive element is dominant in handpress printing. Such a press not only records, but glorifies because the hand-printed sheet emanates a unique liveliness and sparkle, and to the touch a sculptural character; it pleases the eye, the mind, the hand.

Presses. A handpress, like gold, is where you find it. Scan classified advertisements of used printing machinery in large dailies and trade journals; run a Want Ad. The best source of information is handpress printers. But the surest approach is through English companies which acquire and re-condition antique presses.

Brett & Cox, Ltd., 15 Black Friars Lane, New Bridge Street, London, E.C.4.

Copper, Charlton & Co., Ltd., Trent Bridge Works, Nottingham.

Excelsior Printers Supply Company and Frederick Ulmer, Ltd., 63 White Lion Lane, London, N.1.

T. N. Lawrence & Son, 2 Belding Heart Yard, London, E.C.4

Harry F. Rochat, Cottonwood Lodge, Stapylton Road, Barnet, Hertford.

Federick Ulmer, Ltd. (see Excelsior Printers Supply Company).

F. W. Woodroffe & Company, Ltd., 137 Mile End Road, London.

(Prices run from about \$350.00 for small models, to \$750.00 for the larger—FOB).

Cylinder Handpresses. (Asbren). The E.G. Lindner Company, Ltd., 612 East Twelfth Street, Los Angeles, California 90015

(Challenging). Gane Brothers & Lane, 1335 W. Lake Street, Chicago, Ill. 60607.

(Vandercook). Vandercook & Sons, 3601 West Touhy Ave., Chicago, Ill. 60645.

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Printing as a Hobby  
J. Ben Lieberman  
1963; 128 pp.

ANYONE

who would

letterspace lowercase

would steal sheep

FRED GOUDY

Printing as a Hobby  
J. Ben Lieberman  
1963; 128 pp.

Printing as a Hobby  
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## The Reader's Adviser (vol 2)

"A Layman's Guide to the Best in Print in General Biography, History, Bibles, World Religions, Philosophy, Psychology, the Sciences, Folklore, the Lively Arts, Communications and Travel." And, by God, it is. As access to quality, it beats college.

The Reader's Adviser (vol. 2)  
Winifred F. Courtney, Ed.  
1969; 912 pp.

\$18.50 postpaid

from:  
R. R. Bowker Co.  
1180 Avenue of the Americas  
New York, N.Y. 10036

or WHOLE EARTH CATALOG

## THE READER'S ADVISER

A Layman's Guide to the Best in  
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Bibles, World Religions, Philosophy,  
Psychology, the Sciences, Folklore,  
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and Travel. • New 1969 Edition,  
Winifred F. Courtney, Editor. •



### The Book Review

A good book magazine. Carries sharp reviews, information on bookmaking, and talk with authors. Unglamorous and lively.

The Book Review  
Jay Ball, ed.  
\$4/yr (10 issues)

from:  
The Book Review  
Box 14143  
San Francisco, CA 94114

The most intriguing of the naturalistic justifications of death occurs in a book of short stories, entitled *T Zero*, by Italo Calvino (Harcourt). The argument, as presented by an unidentified narrator, may be summed up as this: The risk we ran was living: living forever.

Life, says Calvino, amounts to self repetition. When this self repetition is simple, as with the cell which does not die but merely divides and divides and divides, life extinguishes itself by overrunning the earth and exhausting the resources necessary for its continuation. Life continues only by evolving for itself the concept of seed. Once the seed has come into being, errors and improvements in genetic transmission occur, giving rise to other species. To control these errors, life becomes sexual, in that genetic messages must to some degree "match" before life will result. With the development of sexual reproduction, the first death of an individual occurs, and for the first time, reproduction entails bringing another into the world. Thus, death is to life as the concept of zero is to mathematics: it sets life free.

Impenetrance. The sound and the fury of change. Miroslav Eliaše is a Rumanian, settled here in this country, who rounds out the feeling of a Merton and a Suzuki with a fine fire of fiction. The stories in this book—*Two Tales of the Occult* (Herder, \$5)—written in the personable manner of Conan Doyle's mysteries and Maugham's adventures, stories that bend reality back on itself.

Eliaše usually ventrals academic-intellectual books concerning societal mythologies. This is his first fiction translated into English (other stories and novels of his have not yet been translated)—and these tales never stop. Always in back of, say, a pleasant chat between friends, an outing, is the structure of the Social Delusion, the falseness of time, the impregnance of people and events.

'Nights at Serampore', the first story sees three Europeans wandering through a dense jungle near Calcutta, coming across a dreamlike sequence of happenings between Indians, and slowly realizing that they're seeing the past, the past with the present time field, so that time itself is whirled into a different pattern in which the past comes out vaguely different and the present, too, begins mysteriously changing...

For more books, the American Book Association, Publisher's Weekly, R. R. Bowker, etc., all the stuff the CATALOG has used, see the history/how-to section following p. 434.

364 Books  
Communications

WALTON, IZAAK. 1593-1683.

*The Compleat Angler*, or, The Contemplative Man's Recreation. 1653-1676. Dutton Everyman's 1906 \$2.45; ed. by John Buchan Oxford 1914 World's Classics 1935 \$2.75

"The Compleat Angler," one of the most famous books in English, was written by a self-educated commoner. Walton wrote it for his own pleasure as well as that of others; it not only describes the technique of angling but is a contemplative essay on the peace and quietude attainable by the fisherman. After its first appearance in 1653 there were frequent revisions adding new material during the author's lifetime. George Saintsbury called Walton's style one of a "singularly simple and direct," in spite of Walton's background and he became recognized as a "gentleman" of cultured tastes and learning. An Anglican and Royalist, he was overjoyed with the Restoration. In his own time, Walton was known as a biographer, author of the "Lives of Donne and Herbert" (Cambridge \$90) and "Lives of John Donne, Sir Henry Wotton, Richard Hooker, George Herbert and Robert Sanderson" (Oxford \$2.75).

Kenneth Rexroth wrote a charming essay on "The Compleat Angler" in the *Saturday Review* of Sept. 16, 1967, which catches the secret of its enduring appeal—and that of its author shining through it:

"Izaak Walton, above all other writers in English, owes his enormous popularity to his virtues as a man, and these virtues are what condition his style and give his work its elemental meaning. Millions have read him with joy who have never caught a fish since childhood, if at all. Indeed, ... in America at least, most of the kinds of fish he talks about are left to small boys. The second half of the *Compleat Angler* was added in late editions and written by Charles Cotton as a guide to trout fishing in rough water. Those who went to know how to catch fish can learn most from Cotton's additions. We read Izaak Walton for a special quality of soul ... for his tone, for his perfect attentiveness to the quiet streams and flowered meadows and bosky hills of the Thames valley long ago. ... It may sound outrageous to say that Izaak Walton wrote one of the Great Books—and that about catching fish—because he was a saint, but so it is. ... He is, in fact, an unusual embodiment of a quietly powerful tradition, that of the contemplative laymen, St. Thomas More, Nicholas Ferrer, William Law, Gilbert White. After the eighteenth century this type is more commonly found in the sciences than in religion. And like Gilbert White's *Natural History and Antiquities of Selborne*, Walton's *The Compleat Angler* is, in a sense, a scientific work, an outstanding example of the piety of science."

Izaak Walton. By Gilbert Bottrill. Pamphlet. British Bk. Centre press, \$75

The Art of "The Compleat Angler." By John R. Cooper. Professor Cooper teaches English and the humanities at the University of Chicago. *Duke Univ. Press* 1967 \$6.00

### Demco Library Supplies

After 3 years of handling books I've come to understand and appreciate library hardware—card catalog drawers, bookends, magazine protective covers, book trucks, repair fabric, record-keeping cards. Noble stuff, right up there with fireman's hats as far as I'm concerned.

### Synergy

Extraordinary publication. It's an on-going bibliography of the Subculture for libraries. Every two months there's a new issue on a new subject—Women's Liberation, Communes, Ecology, Indians—with articles, pictures, and fine annotated bibliographies, the cherry fruit of solid research. As I understand it, the service is only available to libraries: free. So bug your local library, or, hmmm, I wonder what it takes to start a library. Back issues of Synergy are worth getting. Also they answer questions on research problems.

—S8  
[Suggested by William Hagan]

### Synergy

via your local library

from:  
San Francisco Public Library  
Civic Center  
San Francisco, CA 94102

Odum, Eugene. *Fundamentals of Ecology*. (2nd ed.) Saunders, 1969. \$8.50.

A compendium of interesting ideas for ecosystem management, this text is useful both for understanding some possibilities for technically resolving our conflicts with nature and, more important, for understanding actual and potential strategies employed by ecosystem explorers.

Bellamy, Edward. *Looking Backward, 2000-1887*. Modern Library, 1951.

A wealthy Bostonian awakens to find himself in the year 2000 A.D. He falls in love with the great granddaughter of his Bostonian fiancée and with her tours the ideal socialist commonwealth. Bellamy's utopia had tremendous impact on social reformers and had hundreds of imitators.

## Science Books

A quarterly published by American Association for the Advancement of Science (the people who publish *Science*). Most of the reviews are specific and quite nit-picky; if they don't like a book they often cite better books on the same subject. It reviews books right on target to kindergarten level, very helpful in locating non-anthropomorphic, factual, logical, and with delightful books for young ones.

[Suggested and reviewed by John Lord]



SCIENCE BOOKS

### Science Books

\$6.50 /yr., (quarterly)

from:  
Publications Department  
American Association for the Advancement of Science  
1515 Massachusetts Avenue N.W.  
Washington, D.C. 20005

621-47 SOLAR ENERGY ENGINEERING.

HALACY, D. S., Jr. *Experiments With Solar Energy*. NY: Norton, 1969. 147 pp.

illus. \$4.14. 49-18892.

*Experiments with Solar Energy* is a revised and updated version of the author's *Fun with the Sun* published in 1959. Being colloquial reading, it might serve as a classroom or family science project manual. Directions are given on the selection of materials, approximate cost, the construction and operation of devices utilizing solar energy: solar furnaces; cardboard cooker; solar oven; water heater; solar still; radio; and a solar-powered airplane. Emphasis is placed on the utilization of solar energy in space vehicles and its potential use on lunar stations that offers opportunities to enterprising and imaginative young people. Its expanded usefulness on earth, particularly, in arid lands is not overlooked. The value of this updated volume is enhanced by the inclusion of clear diagrams and illustrative photographs. Lists of firms engaged in solar-energy applications and a subject index. A more comprehensive bibliography would have been desirable. (See also *Solar Energy* by John Hoke; Watts, 1968; 3/8-4(1) 59.) SH+

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(C) Two Shelf Display. Holds approximately 75-80 books on two sloping shelves. Dimensions: 28" long, 17" wide, and 39-1/2" high, including convenient handle formed by "U" shaped tubular frame. Bottom shelf 17" from floor; space between shelves, 11-1/4"; top shelf, 30" from floor.

41-6350 — Mist Gray ..... \$54.50  
41-6351 — Light Beige ..... \$45.00  
41-6352 — Mellow Gold ..... \$45.00



## STEAL THIS BOOK

I grew up copping change from my mother's purse. In college I stuck a transistor in the telephone cord to get free calls. Then I entered the big time, became an Army officer, and was trained in advanced lying, cheating, and stealing until I finally indulged in disgust I turned honest. It was an abandoned act of rebellion, and I, freed me. I was just barely in the Army after that.

If you steal, you're in the Army. That's my perspective. Popular theft is largely a matter of who's Fair Game. In *parious times everybody is, to somebody*. In the 1770's American rebels righteously robbed Loyalists and vice versa. During the same period in stable Indian tribes theft was practically unknown within the tribe (encouraged sometime outside the tribe). Are booksellers outside the tribe?

Most bookstores operate very near the financial edge. Reportedly one-third of all bookstores lose money, run at a loss. They're in the business for love, not money.

I know enough now about book-making, selling, and using to assert that books are a fantastic bargain, like matches. Stealing books is a lot like robbing match girls, not exactly a far-out-revolutionary gesture, just a lazy, military thing to do. —SB

## Personalized Bibliographic Service

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There's more. The good part. To order a book, any book in the world, you just send a card or other written transmission, to PBS; they take care of all the crap of ordering from the publisher AND (it's coming!) they split their profit on each time with you. . . in practice, this means 10-15% off on hardbacks! You may or may not get something off on softies, depending on what the trade discount is.

It will also conduct a search with used book stores for anything that isn't listed here, but is out of print.

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Cost is negligible— you pay \$1 for the first category you sign up for, and \$50 for the rest. . . that's your entire financial pitfall FOR A YEAR. . . except for whatever monthly list you manage to acquire, of course.

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Brian Weiss  
Ann Arbor, Michigan

## Remaindered Books

These are books you've got stuck with. After a few years in the warehouse, they are unloaded at astonishingly cheap prices— mere pennies on the dollar— to remaindering houses. Two reliable remainderers are:

Marbors Books  
131 Varick St.  
New York, N.Y.

Marbors deals by mail catalog— huge ones— and a card should get you on their mailing list. They also insert their catalog in the NY Times from time to time, as they have several retail stores in NYC. Their discounts are good and their books are usually in good shape. A little slow by mail, though. Records and posters, too. Prices from 50¢ to 10-15 bucks, depending on what they think they can charge. Also, they sell some books at list prices. These books are marked in the catalog by a star. Remember this, because they have recently stopped telling people what the star means— or have found a really good place to hide that information.

Publisher's Central Bureau  
33-20 Hunters Point Ave.  
Long Island City, N.Y. 11101

About the same as above— often many of the same books in stock, prices about the same too. But mail only.

Bill Marano  
Ridder, Pa.

Publishers Central Bureau

## Magazine subscription discounts

Re: magazine subscriptions— one should never subscribe through the magazine itself, do it through

Publisher's Clearing House  
332 Main St.  
Port Washington, N.Y.

They will make any cheaper offer or refund the difference. Write for their current price list.

Donald McKenzie  
Berkeley, CA

## Wittenborn and Co.

When it comes to buying books by mail I've had few times when it's been really necessary. Mostly they've been when I've been away from New York and I wanted the book NOW. If the book involved the visual arts and came from anywhere in the world I've sent the price or its approximation to Wittenborn and presto! They have always responded immediately and more satisfactorily. They're the kind of book store that has most of the staff mailing or typing— busy— not getting in your hair if you want to browse but always helpful. It's never been a drawback of a book they haven't been able to help us with; they are always ready to refer you to someone else if they can't help you. They have a regular staff for information and they charge with us. Introducing new customers is always a charge; they get kind of wary because they begin browsing and suddenly book accounts fall.

Wittenborn publishes free lists of recent arrivals on their shelves; they are mailed irregularly. They give a 10% "courtesy discount" with some arm twisting. They are the best source in the U.S. for back issues of art and architecture magazines from both the U.S. and most everywhere else. They also publish and/or distribute many of the best and most interesting of the trade Road Test and large publications such as Tantra Art. In short, it's a book freak's heaven.

[Suggested and reviewed by ONYX]

Catalog from:  
Wittenborn and Co.  
1018 Madison Avenue  
New York, N.Y. 10021

## ART TEACHING AND LEARNING AS PERFORMING ARTS

by Robert Filliou and the Reader  
A multi-book, with the participation of John Gage, Benjamin Patterson, George Brecht, Allen Kaprow, Marcel Vera and Björns and Karl Rot, Dorothy Innance, Dieter Roth, Joseph Beuys, Spilhaus, and others. It is the reader's use, German and English text, 228 p., wrappers, 1970

The reader is free to make use of his own writing space; it is hoped that he will enter as performer, for this is about permanent creation and audience participation.

## Introductory Ripoff

A final suggestion for other tool-gatherers who've noticed the high cost of books in general and reference works in particular: At last! You can make the system work for you.

Yes, you too can manipulate the Establishment! How! Simple— through the intro offers of book and record clubs.

Most every book club has come-on offers to make your month's order— usually three books, all for only thirty-eight and two box-tops. Seriously, though, there are some good buys. The condition of course, is that you buy a certain number of books at member prices in a given time period.

What the clubs hope for is that you stay in. When you do it get out. Fulfill your minimum obligation and resign your membership. The next time a good offer comes up, join. (It helps if you've changed your name or your address in the meantime. If not, join your wife, your wife, your partner.) A friend has joined the Mainstream Book Club eight times.

Here's how he does it. Their latest ad offers five books for \$1, if you buy four more books in the next two years. That's worth up to \$85 when you send it in. There's almost no way four book-club books will cost you \$85, so you come out ten, twenty, forty dollars to the good.

If I'd just as soon you didn't put my name down for this, if you did it, because some of my book clubs may get your

Detroit, Michigan

## Internews

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[Suggested by Patrick Leavens]

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This is the greatest source of in-print book discounts I've ever found. Just write Hamilton and ask for a bunch of order forms and this "List of Publishers." After getting them, merely hand up your book you want in Print or Whole Earth Catalog. They make and an order form for each book (50¢ handling— no problem with anything but paperbacks). Most books from major publishers are 1/3 off list price; Lord of the Rings is \$17.50 from the publisher and \$12.43 (including handling) from Hamilton. (Use the order form; I got one shipment one week from my mailing the order. And no foul-ups yet! Minimum discount you get is 15%.

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## Government Printing Office

The best buys in books in the U.S. are the U.S. Government, who prints all manner of fascinating non-fiction. If you're interested in a particular area you might as well get the free list of publications in that area. Or you can get the (most useful, I've found) free bibliography of Selected U.S. Government Publications. Or, for totality, for \$69/yr, the Monthly Catalog of U.S. Government Publications. All, all from:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, D.C. 20402

## Books from Britain

Larry Schwartz calls the readers attention to Blackwell's Books, England, (p. 2). Your readers might be interested in two other book sellers in Great Britain.

James Thrie (55-59 South Bridge, Edinburgh, Scotland) is a book-seller dealing in new and used books. He can provide books in any area— he will send catalogs on request or the price of an individual book if not in a catalog or consistently less than U.S. prices. Hardbacks cost 1/3 to 1/2 what they do here. Penguin paperbacks (for example) can be obtained at about 1/2 what they cost locally. You can open an account or send your personal check (Made out to Messrs Brown Bros. Harmin & Co., New York). Add 15% for postage & insurance (even so, it'll be a big bargain).

This deals in antiquarian and other used books as well. Books dating to the 16th Century.

(The only books that are not cheaper from Mr. Thrie are those published by U.S. University Presses.

The service is courteous, prompt, and personal. It takes about 10 weeks for books to arrive from Britain via surface mail.

For the "Book freaks":

The Folio Society (6 Stratford Place, London WIN 0BH, England) publishes books on history, belles-lettres, biography, poetry, fiction, by the world's greatest authors, in boxes, beautifully bound (canvas, leather, wood, etc.) editions. Some of the books have illustrations directly from the wood block or soft ground etchings. Presently, books are being offered at \$3.44, including postage. The most expensive is the two volume Canterbury Tales at \$8.75. Send for their catalog. Members (there is no membership fee) must buy at least four books per year.

James K. Buhn  
Pensacola, Florida



Ray and Chester came back out in a minute to get the flowers they'd brought in the house. The flowers had been delivered to the funeral home. Six wreaths: from Marcelle and her family, Leonard and his family, Mrs. Gadsby, the Thorntons', Reverend Bagby on behalf of the congregation (although only five people in the congregation came to the funeral), and one from me. I was signed, simply, "hospital staff." Ray and Chester took the flowers in and arranged them in front of the casket, and at the ends, and then as a final act they opened half the coffin lid and the people who had gathered in the church filed by for one last look at Emmet, lying on the light-blue pillow, hardly recognizable without his beard, and in the suit and shirt and tie he'd dreamed in. His lip was puckered unaccountably but the whole thing was so unlike Emmet that detail didn't matter much. The people filed by, some of them sniffing, and then they all sat down in the front row, fourteen people counting children and the Reverend Bagbys and Ray and Chester and Mr. Olney and the Thornton girl who was going to sing Abide With Me.

Mrs. Bagby played the piano softly for a while.

And then the Reverend Bagby, not a tall man, kind of pale but still strong in his impression, stood up and opened his Bible.

He read from Ecclesiastes. The third chapter. Sweetly, and yet with power and resonance in his voice he said that for every thing there is a season, and a time for every purpose under the heaven.

There is a time to be born and a time to die.

A time to plant and a time to pluck up that which is planted.

A time to kill, and a time to heal.

A time to break down and a time to build up.

A time to weep and a time to laugh.

A time to mourn and a time to dance.

A time to cast away stones and a time to gather stones together.

A time to embrace and a time to refrain from embracing.

He said there was a time to get and a time to lose, a time to keep and a time to cast away. A time to read, a time to sew, a time to keep silence and a time to keep silence now.



# Learning

## Dr. Spock

**Baby and Child Care** by Dr. Benjamin Spock is an excellent book to have handy, especially with a first child. The advice and explanations Dr. Spock gives regarding fever, rashes, coughs, inoculations and clothing for the infant is presented in simple language, somewhat wordy and repetitious, but in such a manner that you cannot misunderstand or confuse his instructions. Bathing an infant and sterilization of bottles, etc., seemed far too complicated. The chapters on illness, first aid, and special problems are excellent and probably the most read and re-read chapters in the book. Not only do you get lots of psychological guidance in the areas of toilet training, weaning, thumb-sucking, and bed wetting but, as may be expected, there are sermons on aggressive children, no-war toys and growing up in a bomb-oriented world. You couldn't possibly agree with everything Dr. Spock says but after reading this book you are left with the feeling that you should relax, enjoy your baby, do what seems right and natural and that Spock is speaking from experience and common sense.

[Reviewed by Connie Duckworth]



**Baby and Child Care**  
Dr. Benjamin Spock  
1946, 1968; 620 pp.

**\$1.05** postpaid

from:  
Pocket Books  
1 West 39th Street  
New York, N. Y. 10018

or WHOLE EARTH CATALOG

More babies are overdressed than underdressed. This isn't good for them. If a person is always too warmly dressed, his body loses its ability to adjust to changes. He is more likely to become chilled. So in general, put on too little rather than too much and then watch the baby. Best guide is the color of his face. If he is getting cold, he loses the color from his cheeks.

To some degree, the first pregnancy spells the end of carefree youth—very important to Americans. The mildly idyllic goes gradually into eclipse, and with it goes thoughtless grace. Both achieve are temporary but very real. The woman realizes that after the baby comes there will be distinct limitations of social life and other outside pleasures. No more hopping into the car on the spur of the moment, going anywhere the heart desires and coming home at any old hour. The same budget has to be spread thinner, and her husband's attention, all of which has gone to her at home, will soon be going to two.

155. Gradual weaning from breast to cup in the middle of the first year. If a mother is producing plenty of milk, how long should she plan to nurse? Best of all, most natural of all, is to nurse until the baby is ready for weaning to the cup. Most breast-fed babies are becoming weaned between 5 and 6 months.

A 2-year-old baby shouldn't be worrying about the consequences of his actions. This is the period when he is meant to learn by doing and having things happen. I'm not advising that you never warn your child in words, but only if you shouldn't always be leading him out beyond his depth with words.

It's a good idea to begin offering a sip of milk from the cup from the age of 5 months, so that the baby gets used to it before he is too opinionated.



Reader to remove and distract him, then just say, "No, no!"

Between the ages of 1 and 5 years, children may develop fever as high as 104°F (sometimes even higher) at the onset of mild colds, such as colds or sore throats, grippie, just as often as with serious infections. On the other hand, a dangerous illness may never have a temperature higher than 101°F. So don't be influenced too much, one way or the other, by the height of the fever, but get in touch with the doctor whenever your child appears sick in any way.

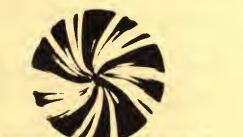
## How to Parent

So many child psychology books leave an unsure new parent more anxious or even guilty feeling. This one builds confidence.

**How to Parent** is both a practicable review of child psychology and an excellent catalog of toys, books, records, equipment, parental survival, and inexpensive do-it-yourself materials and projects useful in a child's physical, emotional and intellectual development.

The text concentrates on the different stages of development from birth to six years, offering the most basic findings of behavioral science in relation to each stage, and usable advice on how to help a child structure his self-concept to become a self-regulating person. Most important, the author insists the application of these findings and advice be guided by the feel of childhood—a contact with the child within that you that once were, and that parents must have the wisdom to follow their own hearts, no matter what the "experts" say.

[Reviewed by Faye Kesy]



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or WHOLE EARTH CATALOG

You may be able to toilet train a child who is less than a year old, but you are going to have to pay a psychological price for training that early. Personally, I don't think the price is worth it.

Let's be very clear: you cannot spoil an infant. Cuddle your infant as much as you want; you won't spoil him. Feed him as often as he's hungry; you won't spoil him. Sing and coo to him as much as you want; you won't spoil him. Pay attention to him as often as he cries; you won't spoil him. The best thing that can happen to your baby, psychologically speaking, is to have as many of his needs gratified and to have as few frustrations as possible. His ego or sense of selfhood—too tender and immature to be able to cope with much frustration now. There will be plenty of time for life to teach him about frustrations when he is older.

Books are far inferior in effectiveness to what a mother can do to stimulate the language development of a child. Continue the "label the environment" game that you started in the stage of infancy. You can do this whenever you are with him. Point to objects in the house and name them for him. When you are riding in the car, you can point out and name objects that you are passing: truck, tractor, house, church.

We may say, "Now that was a bright thing to do, wasn't it?" or "How could you be so dumb?" or "How could you not get any sense!" Each time we unleash one of these belittling statements we are chipping away at our child's self-concept.

Threats deal with the future, but children live in the present. Therefore, threats are useless in improving the future behavior of a child.

Mother is hurt and furiously accurate: "Willie—no you promised!" She doesn't know that promises are meaningless to children. Promise, like its older brother, a threat, deals with the future. But small children live in the present. If a child is a sensitive youngster, extracting a promise from him will merely teach him to feel guilty if he breaks it. Or, if he is not so sensitive, it will teach him to be cynical, and substitute verbal behavior for true behavior change.

The time to start a child on the road to awareness is when he is a preschooler. A true awareness of the sensory world is his most basic foundation for thinking.

In addition to providing a wide range of sensory experiences for our children, we need to provide a variety of materials which they can use as stimuli for their thinking—materials which your child should have between the ages of three and six. He should have available lots of paper; crayons; felt pens or watercolor pens; scissors with blunt ends; stacks of old magazines; cardboard of various shapes and sizes; a cardboard box with white and colored chalk; a scrapbox for collage, containing all kinds of scrap wood, fabric and paper; glue; wooden blocks of various sizes; dress-up clothes and costume; a record player or tape player; inexpensive records he can play by himself; good records you play for him; Lego or similar types of construction toys; playground and clay, books. Your child should have a set of plastic, magnetic alphabet letters and numerals and a metal blackboard they can stick to. Without the above-mentioned materials, your preschooler would be handicapped in his thinking as a college student with no textbooks.

There is also no reason why your child cannot continue to have an evening bottle to go to sleep by, even at this "advanced age" of two or two and one-half. Many of your neighborhood "experts" will frown on you if you do this, and say: "What!—he's two and a half and he hasn't given up the bottle yet?" So what? What's the rush? If he still relies on a security device, is there any reason why he won't have to quit it at this age? All three of my children had a bedtime bottle. They were up until they were between two and one-half and three years of age.

One of the important things about the evening bedtime ritual is that it should be a time of pleasure for your child. We want him to look forward to going to bed. He should not feel that bedtime is something unpleasant, where he is banished abruptly to a dark room, while the rest of the family does interesting things. The evening bedtime ritual should not only be a time of pleasure for the child, but for mother and father as well.

## DR. DODSON'S WHIZ-BANG, SUPER-ECONOMY PARENTS' SURVIVAL KIT

If you have skimmed over this entire list of books, your reaction right now may be: "Wow! I'd like to buy each of those books, but my family budget won't stand it!" I have considered that very important financial factor and come up with the following list of thirteen paperback books which will form a basic home library for parents at the relatively modest cost (considering today's inflation) of only \$11.60 for all of them. Here they are:

1. *Baby and Child Care*, Benjamin Spock (Pocket Books), \$9.95.
2. *How to Give Your Child a Good Start in Life*, Leland Glouven (Collier, 1962), \$9.95.
3. *The Intelligent Parents Guide to Raising Children*, Eve Jones (Collier, 1961), \$9.95.
4. *How to Guide Your School-Age Child*, Leland Glouven (Collier, 1965), \$9.95.
5. *Between Parent and Child*, Haim Ginott (Aven, 1969), \$12.25.
6. *Child Behavior*, Frances Ilg and Louise Bates Ames (Dell, 1960), \$8.00.
7. *Your Child*, Arnold Arnold (Essence/Special Service Edition), \$5.00.
8. *Play Therapy*, Virginia Austin (Ballantine), \$9.95.
9. *A Parent's Guide to Children's Reading*, Nancy Larrick (Pocket Books, 1969), \$5.00.
10. *A Parent's Guide to Children's Education*, Nancy Larrick (Pocket Books, 1963), \$5.00.
11. *Summerhail*, A. S. Neill (Hartford), \$1.95.
12. *Accident Handbook*, Children's Hospital (Children's Medical Center 1300 Longwood Avenue, Boston, Massachusetts), 1950 \$2.25.
13. *A Parent's Guide to Better Baby-Sitting*, Faye Cobb (Pocket Books, 1963), \$5.00.

TOTAL COST: \$11.60

## Playthings

The old standby who always comes up with fifty, new items, especially for infants is Creative Playthings. Catalog free.

Childcraft has a good similar line, with some more elaborate toys. Catalog free.

Preschool Things Catalog is a nice adventure of Sesame Street (long live), with various toys and books. Catalog \$0.50.

Constructive Playthings has stuff especially for yards, schools and playgrounds, along with dolls, games, etc. Catalog free.

Childlife Play Specialties has strictly yard and playground stuff. Catalog free.

Polytops is a British outfit with extraordinarily nifty cardboard items - rollers, furniture, little houses, etc. Catalog free.

[Suggested by Jeremy Scott Wood]

Galt Toys has complex, civilized, inexpensive British stuff. Catalog free?

-SB

## Puppets

From 3 years. Simple and expressive vinyl puppets for fantasy fun. Blue whale, green frog, grey wolf, red dragon, yellow duck. Designed by Dion Porzio. \$2.95 each.

## Creative Playthings

### Tube Rattle

From 3 months. Soft clear plastic tube for watching, touching, chewing, bending and stretching. Five stainless steel balls locked inside roll freely through the entire loop. Designed by Fredun Shapur. \$2.50

### Creative Playthings

Princeton, New Jersey 08540



### PUNCHIN JUDY BAG

The perfect outlet for active youngsters' energies, our Punchin Judy Bag will take all the punishment they can deliver. Tackle or punch it, roll it or ride it - this sturdy bag comes back for more. Easily disconnected from its durable rope for separate play on the floor. Designed for both indoor and outdoor use, but store inside. Length 27", diameter 9". Made with strong cotton duck, a heavy top trap and firm wood stuffing. Screw eyes included. Age 2½ up. (14.3 lb.) \$15.95

Childlife Play Specialties, Inc.  
1640 Washington St.  
Holliston, Massachusetts 01746



### LUNARTRACK

Articulated caterpillar track propelled by one child power. The child gets in and crawls forward in a normal manner the tank revolving round the child. The tank like action is extremely realistic and the track sill surmount small obstacles. A certain degree of skill develops with use and familiarity. Sections can be omitted to make a circumference more adaptable for younger children.

Dimensions: Width 15" Overall length 56"  
Carry home Case: 35 1/2" x 2 3/4" x 28 1/2"  
Price \$23.00

Polytops  
Paperchase Products Ltd.  
11 Alfred Place  
London WC1  
England

Preschool Press, Inc.  
159 West 53rd St.  
New York, N.Y. 10019

## MATH IS A TOUCH

Touch to Learn is a find-out-for-yourself math machine. It works on flashlight batteries with visual cassettes, each stocked with 20 picture problems. Only a correct response will wet the tape to the next question. Comes with two programs. Learning to identify Numbers and Learning to Tell Time. Six other programs available separately broaden the program to include counting, addition, subtraction and coin values.

412 TOUCH TO LEARN  
Price: \$8.00 (batteries not included)

413 SET OF SIX ADDITIONAL TOUCH TO LEARN CASSETTES.  
Price: \$6.00

## Play and Playthings for the Preschool Child

This book will be useful to schools, and parents and teachers of children under eight. It was originally published under the title of *Play With a Purpose for Under-Eights*, so the "preschool" in the title doesn't mean only 3 and four-year-olds. Since the author is English, many nursery school teacher the book is written under English assumptions: you aren't going to run out and buy everything you need, and you're going to make use of anything you've got lying round the house anyway, like castoff car tires and coat hangers. Mrs. Matterson has a clear, practical style of writing, and a lovely way of making things sound terribly easy to do. As a matter of fact, most of the equipment and toys in this book are easy to make. Besides giving instructions for making things, Mrs. Matterson says a lot about children's play: the kinds of play, its meaning to children, music, pets, natural play materials, books (there's a whole chapter on story-telling), and play for sick children. Her last two chapters are on planning a playgroup (that's an English co-op nursery school) and an open letter to child-welfare experts and school boards. There's an appendix at the end with a list of books suitable for children from 3 to 6 years old, and a list of sources of supply for play equipment. Probably the editor did the appendix, since it lists American sources of supply and information. She also must have wended out the exclusively English terms and objects available only in England, because everything in the book seems to be universal and easy to get. In Evelyn Bayar's introduction she gives the American viewpoint on what seems to be a point of difference between parents and teachers here and in Great Britain - whether or not to read fantasy and fairy tales to young children. In England parents and teachers rarely seem to

worry about the effect on young children of wicked stepmothers abandoning children to starve, of the chopper coming to chop off your head when you play London Bridge, but here we're all awfully uneasy about that sort of thing. Mrs. Bayar is in favor of "a story sort of here-and-nowness" for three and four-year-olds. (I disagree with her here - taken literally that would mean throwing out The Three Bears and Peter Rabbit.)

[Suggested and reviewed by Dorothy Horn]

Play and Playthings for the Preschool Child  
E.M. Matterson  
1965, 1967; 180 pp.

\$1.95 postpaid

from:  
Penguin Books, Inc.  
2110 Ambassador Rd.  
Baltimore, Md. 21207

394 55th St.,  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

"Basic materials like water, earth, wood, vegetable matter, rock and metal (impose a relative, impersonal, uniform discipline on us all... If your children were provided with nothing else ever, they would still be far happier and learn more than a good many children with... a room full of status-symbol toys."



Galt Toys  
30/31 Great Marlborough St., W1  
London  
England

Constructive Playthings  
1040 East 88th St.  
Kansas City, Missouri 64131

**BOUNCING TUBE**  
This heavy-duty truck tire tube inflates to 36" diam. and 11 1/2" high. The two heavy canvas covers and strong webbing supports can take all the punishment energetic bouncers can give it. Na. 2 4 lbs. \$9.95



### THREADING BLOCK

Children can't resist this natural hardwood toy that invites involvement. Push the wooden needle into a hole; it comes out of a hole on another side. Changing the order in which holes are threaded creates a variety of patterns on the block. Unusually fine for developing finger, hand and eye coordination. 18 mos. - 3 yrs. RM. 163 1 lb. \$3.95

Childcraft's Education Corp.  
Box 94  
Bayonne, New Jersey 07002



And Reverend Bagby praised over a silent prayer with his arm upraised and his hand outstretched, till finally someone among the people said amen, and Reverend Bagby concluded with verse fifteen:

That which hath been is now; and that which is to be hath already been; and God requireth that which is past.

Reverend Bagby began to speak then, and remarks about Emmitt, personally, were only a part of what he had to say. He gave a little of Emmitt's biography. He said that he was born there on Trace Fork, that he'd grown up there, and had gone to Finley County High School. He said that he'd served in World War Two, and been wounded, and that after the war he'd gone into the coal business for a while. He talked about Emmitt living a few years in Louisville, and about his time in the Veterans' Hospital and then his return to Trace Fork when his father died. But the remarks about Emmitt personally were only little decorations on a larger statement he was trying to make that D.R. listened to very carefully. It wasn't a logical statement, it was better than that. He began with the reading from Ecclesiastes, and then allowed his words to spread up and outward into a kind of song. Half the time he spoke with his eyes closed. And now and then he'd stop suddenly, hushed by some inner command, and in the church a silence would build that he in turn would use to build his song upon, reaching higher and higher and lower and lower, sometimes bridging the high and the low by lapsing into an unknown tongue, never much, and never for very long, just little shins of the pure language of glosolalia, fah lan tah, meh lah lah, fe lan tah.

And D.R. listened.



## Wooden Toys

Community Playthings has the widest variety, including a nice set of blocks. These toys are the product and income of the Rifton, N.Y. Bruderhof community, Catalog free.

[Suggested by William Iltson]

Vermont Wooden Toy has particularly lively small toys. Dune buggy and raceway. Kid-size wooden sled. Dusen-bug with passengers that fall out. Catalog free.

Everdale Toys, from a community in Ontario, prices stiffer because of the border. Catalog free.

Matten Enterprises, fine toy boats. Catalog free.

[Suggested by Joann Yellott]  
Dick Schnacke has a splendid selection of traditional toys — ball & cup, Jacob's ladder, bull roarer, tops, bean bags, etc. Good prices (\$60 — \$4.50) Catalog free.

[Suggested by Bob Railroad]

—SB

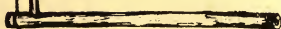


## Unit Block Family Sets

- F-135 Three Year Old Set Unit Blocks.  
32 blocks with 7 different shapes. . . . . \$ 9.50  
18 lbs.
- F-145 Four Year Old Set Unit Blocks.  
55 blocks in 12 shapes, 32 lbs. . . . . 16.50
- F-155 Five Year Old Set Unit Blocks.  
85 blocks in 15 shapes, 50 lbs. . . . . 24.50

Community Playthings  
Rifton, N.Y. 12471

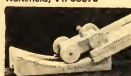
## an authentic mountain folk toy



### Instructions:

- Carefully remove tape, release pith ball
- Place wired ball in nozzle of blowpipe. Blow gently on pipe and ball will float up on air stream. Try to snag the ball on the hoop!
- Now blow again, try to unhook ball and back the ball down into pipe nozzle

Vermont Wooden Toy Co.  
Old High School Building  
Watfield, Vt. 05673



Dune Buggy Raceway \$11.95



Van \$19.80 plus taxes

Everdale Toys  
Box 29  
Hillsburgh, Ontario  
Canada

Dick Schnacke  
Mountain Craft Shop  
Route 1  
Proctor, West Virginia 26055



14-inch Silly Sailor

\$8.50

Matten Enterprises  
The Toy Shop  
Southwest Harbor, Maine 04679

## Diary of An Early American Boy

A quaint account of life on an early American homestead. Its daily entries are so vividly portrayed by the author's word-pictures and ink sketches that you actually feel you are living with Noah and his family. With them, the forest is the marketplace, the creek is power, and Nature is ever in Command. With a knowledge of levers, use their ox to clear a field for corn. With a broadaxe and the help of your neighbors, erect a king post bridge over your creek. With flour ground in the mill you built, bake bread. With scraps of branches taken from fallen trees, make toys for children. And on Christmas Eve, as a blanket of snow glistens outside under the stars, sit by your warm hearth and give Thanks to the Forces that made you.

[Suggested and reviewed by  
Sawdust Ribiba]

## Diary of An Early American Boy

Eric Sloane  
1962; 108 pp.

\$6.50 postpaid

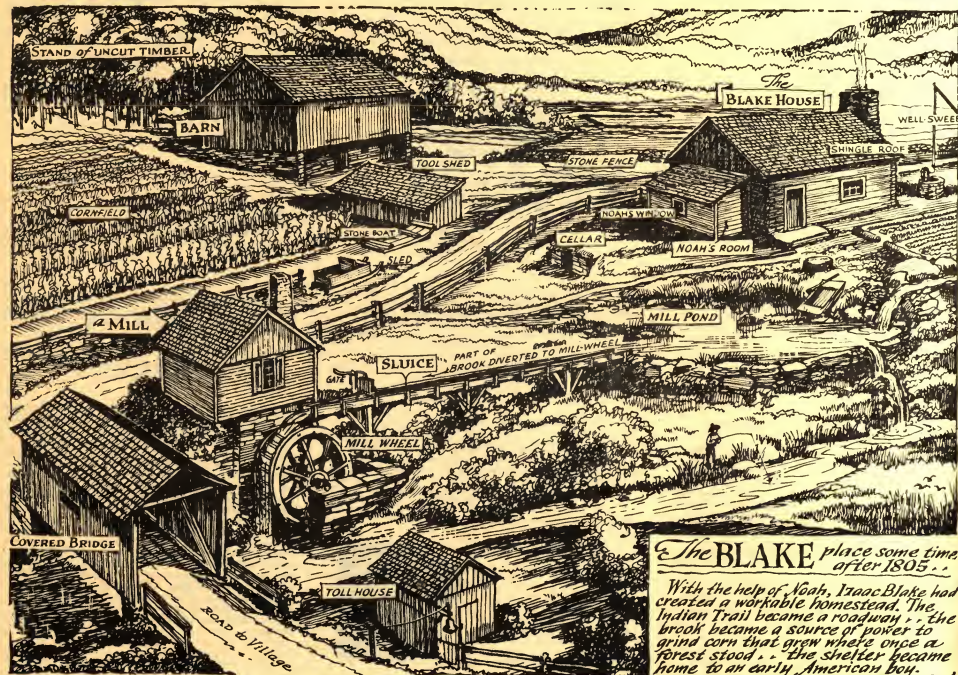
FUNK & WAGNALLS  
c/o T.Y. Crowell  
201 Park Ave. So.,  
New York, New York 10022  
or WHOLE EARTH CATALOG



25: A cold and windy day. Neighbor Adams with son Robert stopp'd by. We drunk mead and mint tea. No work done this day. Father is going to the woodlot behind the barn tomorrow for flour timbers. I shall assist him.

26: A light snow fell which Father believes will be the last of the winter. We fell'd a fine oak and rolled it upon rails for Spring seasoning. Mother is joyous at the thought of a good wood floor.

In the little forge barn half-way down the bridge, Izaak had earned most of the money needed around the homestead. Not that an early American had great need for cash, as most things were traded; but a good farmer always had a cash crop or some paying trade other than farming. Izaak was a nail-maker. He had taught Noah the art of making hand-wrought nails by letting him pump the bellows of the forge as a little fellow; now then he actually hammered or broke the iron nail rods.



*The BLAKE place some time after 1805.*

*With the help of Noah, Izaak Blake had created a workable homestead. The Indian Trail became a roadway; the brook became a source of power to grind corn that grew where once a forest stood; the shelter became home to an early American boy.*



## Children's Books

As an old children's book guy I grew up in a family of four kids in which we read aloud every evening, and have a heavy reading bunch of four kids myself! I feel moved to respond to your San Diego correspondent who in the January issue asks for "any sort of literature for our kids that doesn't constitute total propaganda for the establishment set." First, though, I'd have to say that I don't think it is possible to do very well on her specific request for stuff on families other than the Standard American model, since the books on "other kinds" of families (see Raba Mirsky's *Thirty-Three Mothers and Sisters*, Lois Lenski's stories about Okies and such) which are available and often not bad are written by people who are outsiders to the life they write about and have that flat and didactic quality which goes with it. There are some autobiographies from other cultures which I remember liking (Yvonne B. Mirra, *Children of the Rooftops*; Younghill Kang, *The Happy Grove*; Kim Sungmo, *A Daughter of the Samurai*; Camara Layue, *The Dark Child*; Wright's *Black Boy*) but none of the ones I list are for young children. I'd imagine that the main thing they can and should really want is something which encourages kids to be open and to grow into the kinds of grown-ups who can laugh and cry wonder. Now having, as is customary, re-defined the question, to suit the answer I have, I will make some suggestions along those lines. Just things which come to mind.

If my list has an idiosyncratic character, so would any child's. For kids not only have their individual tastes but also use particular books for some particular thing in that book which speaks to their particular culture. One of mine, for example, loved a book by Robert McCloskey called *Bloomers for Sal* which is about a bear mother and child and human mother and child getting scrambled and then brought back together properly again, and at a time of great stress (she'd had to have part of a finger sewed back on) had it read over and over. She would wake at night crying, and I would hold her with the *Bloomers* for *Sal*, and she'd go back to sleep comforted. Also, kids, like grown-ups, like from time to time to rest or rot their minds with trash.

Anyway, some suggestions.

First, for pretty young kids:

Ruth Kraus' *Rear* is perfect play, and her book *The Big World and the Little House* is a beautiful statement about being at home in the world.

Antonio Frasconi's multi-lingual woodblock picture books *Ser and Soy* and *More Ser and Soy* are extraordinary, and even nice to the *Snow and the Sun*.

The tiny, precise books by Beatrix Potter may seem too old-fashioned to parents who think of themselves as advanced, but I think should be looked at. The best known of course *The Story of Peter Rabbit* but some others are more interesting. I like especially *The Tailor of*

*Gloucriston*. (Beatrix Potter was a terribly cooped-up Victorian clergyman's daughter who wrote and illustrated these stories to keep alive late in life she married, happily, and never wrote another line. Woman's Lib take note.)

Maurice Sendak's *Where the Wild Things Are* is interpreted by the Cambridge types.

I'm not sure if you can get in the U.S. Tove Jansson's *The Book About Moomin, Mymble and Little My*, but if you can get it you'll be amused. Finnish surrealism.

Dr. Seuss, as is well known, gives splendid nonsense; for me, the one which comes off best is *If I Ran the Circus*.

For somewhat older children:

All the books by Laura Ingalls Wilder are wonderful. They should probably be read more or less in order, not only because they follow the chronology of her own life (they are autobiography) but because a sort of vision in each of them of the age level represented. The first one, *The Little House in the Big Woods*, is in it in two ways: the scale of child's life in that way, and full of careful descriptions of such things as how to make a smoke house and smoke meat in it and how to make a wood-end-table, too little. My favorite of the lot is *The Little House on the Prairie*; the chapter in that on "Indians Going Away" is for me one of the most perfect pieces of writing in English for children.

E. B. White's *Charlotte's Web* is a wonderful book about the basic things—friendship, death and birth.

Randall Jarrell's *The Bat Poet* is a fine book about being a poet and has some great bat poetry; his *The Animal Family* is also the real stuff.

Saint Exupéry's *The Little Prince* one might think is really for grown-ups, but my kids like it.

S. S. Seagle, *The Last Unicorn*. So sad.

Tolkien of course.

Three books which we have loved which might not go for kids who don't know New York, are Jean Merrill's *The Puckster War* (guerrilla warfare against trucks) Doris Pien's *The Green Song* (about being a Puerto Rican, in this case a frog, in New York) and George Seiden's *The Cricket in Times Square* (on being alive at in New York).

Two very old-fashioned books which might or might not go for some kids in this age are Frances Hodgson Burnett's *The Secret Garden* which is about a couple of terribly neurotic kids growing into health by working together to make a garden come back to life, and George MacDonald's *At the Back of the North Wind* which is a terribly strange book, I guess metaphorically about death.

Salma Lagerlöf's *The Wonderful Adventures of Nils*; travelling around Scandinavia with a flock of wild geese.

Some children like fairy stories and some don't. Those who do usually need a big supply; readily available in paper are the red, blue, pink etc. fairy books. The stories of Hans Andersen are usually read as fairy stories, but of course they are something else than "tales."

Fox was laughing. He said, "Seriously, Oriole, why did we grow up so fast? Only yesterday, when we began our story and I started to see the world with my own eyes, who was there, my Bear..."

"Oh, keep quiet. You are getting me all mixed up again."

"Oh, my, Fox, listen to me!" will explain. The man who is telling our story, it's his fault, he has done something wrong with the machinery of time, he has let it go too fast. You were supposed to take a million years to tell our story. The poor fellow, he is too old, he gets all mixed up. He should go and take a rest in the forest for a while."

"Oh, my, my, my!" sighed the Fox, "the only thing to do is to start again RIGHT AT THE BEGINNING." Fox looked curiously at Oriole. "What do you mean, a MILLION years?"

"Why, I mean an infinity of time, just as Tsimmu was telling in his story of the creation of the world, who do you remember? Tam times ten times ten times ten years, *malakol malakol malakol talakol pidakol*. When Cocoon Man was floating around in nothing but air and fog he waited a million years for that cloud to come near enough so he could jump on it."

"Yes," said Fox, "Yes, just like a Mammoth, who made the world and then he went to sleep. That's an infinity of time, but it must stop somewhere—it can't go on forever. It must stop somewhere."

Oriole asked, "Why?"

Fox thought a moment then he said, "I dunno. But listen, Oriole, what's time anyway?"

Oriole said, "Why, it's ten times ten times ten times ten years. What else do you want it to be?"

Fox said, "I guess it's growing old."

Oriole said, "All right, then, some people grow old faster than others. You know that yourself. Just as some people live longer than others. It all depends on who is looking at it."

"Why, Oriole, you are crazy. It depends on who is walking, not on the man who is looking at the fellow who is walking."

"No, certainly not. Look at that man over there walking. He seems to be just crawling along, but if you were close to him, he would be going much faster. That's the way with the man who is telling this story. Sometimes he is closer and sometimes he is farther away, so for him that makes us go faster or slower."

Fox said, "Oriole, you drive me crazy. Now I don't know whether I am standing on my head or my feet. It's like that time when we first met you and you drove my feet."

Then there are the Homeric epics. For kids I like best the Giant Golden Book of the Iliad and the Odyssey. I have burst into tears reading aloud the Iliad to a little boy who was mystified (and re-reading Simone Weil's "The Iliad: The Poem of Force" knew why it made me cry).

Some really good collections of poetry are: Herbert Read's *This Way Delight*; Dunning (ed) *Reflections on a Gift of Watermelon Pickle* (can be got in paper), but the photographic illustrations are so good the hard cover is worth it if you can afford it) and C. F. Moule's *Minstrel* (poems by children.) Carl Sandburg's poems, *Wild Song* can be very fitting.

Having listed all this fantasy, I would like to cite also a very good book about fact: Mary Etting's *The Lollipop Factory and Lots of Others* which is about industrial organization, written in a nice non-nonsense style like those old books by Lin. There is also a recent Encyclopedia which doesn't tell you much about anything, but is the sort of thing it is fun to browse through.

I'd also like to list a stunning biography available in paper, which I have been going away to friends of mine: *Journeys Toward Freedom: The Story of Sojourner Truth* by Jacqueline Bernard.

If you are far from libraries or bookstores, Blackwell's in Oxford has a selection of ornamental breads and cookies at the Museum of Contemporary Crafts, but it also has some new to directors and we want absolutely wild hair one Saturday making instant stashed glass with cookie dough and pounded, sourdoughs.

I was rendered absolutely euphoric by your review of my book, *The View from the Barrie*, in the fall issue. Such a contrast to the *American Anthropologist*. They sort of liked it, but were made very uneasy by the lack of footnotes.

Loyally,  
Lita R. Peattie  
Newstar, Mass.



## Indian Tales

About ten years ago a story went around that a beaktrig girl in Sausalito wrote to Ezra Pound and asked him how to write poetry. Pound replied promptly. "Read Indian Tales by Jaime de Angulo. It is how."

De Angulo was a linguist at Berkeley, a bohemian personality in early Big Sur, and a good friend to the "primitive" Pit River Indians in Northern California. (His challenge to the notion of primitive may be found in his excellent article "Indians in Overalls", reprinted in The Hudson Review Anthology, Vintage, 1967). He wrote these stories for his children. They are made from odds and ends of his experiences with Indian stories, language, lore, and mysterious occasions. They are the best children's stories I know, and they are more simply Indian than anything else I've read.

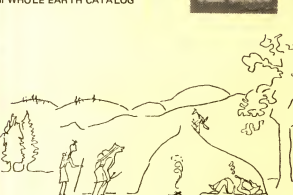
(KPFA in Berkeley has superb tapes of De Angulo reading the stories. Maybe they've decomposed by now. If they were made to a record set, I'd buy them in a minute.)

Indian Tales  
Jaime de Angulo  
1962, 246pp.

\$1.95 postpaid

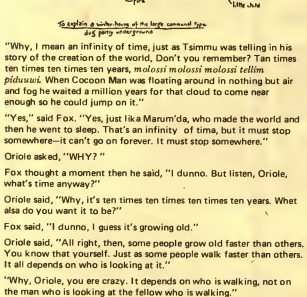
from:  
Hill & Wang  
72 Fifth Avenue  
New York, N.Y. 10011

or WHOLE EARTH CATALOG



"I don't want to, I DON'T WANT TO. I don't want to be a MAN; I want to be a Fox."

"Oh, the Ha-Ha. You are reverting."



He heard a sweet voice sing Abids With Me.

And then he helped them carry Emmitt in his coffin outside to where the sled was waiting.

And he walked with Leonard leading the horse up Trace Fork, the others coming behind, not the old folks, not Mrs. Godesny nor Mr. Oines, just those who could make it in the sun over the broken road and then across the broken hillside up the rugged slope past yellow, yellow earth of the churning wind.

And he helped them lower the coffin into the grave

and rest back down to the homelace

And Mrs. Thornton had been in the old house, cleaning up, and someone had brought food, fried chicken and cakes and pies and a great bowl of green beans cooked with a piece of fat.

And D.R. ate with the people and talked with them and Marcella and her family stayed that night at the homelace and it was a marvelous, far-out time they had, talking about the old days,

That evening in itself's a story but I'm just too tired now honey to tell you any more. I'm crasing now, falling into sleep again, here in Emmitt's bed. I'll tell you the rest when I wake up, for there's oh so much to say.



## Programmed Reading

If you have a pre-school or kindergarten age child who you feel is ready to learn to read but you don't know how to start, this series of programs may be your answer. The series of twenty-two books begins with a set of eight sound-symbol cards. Each 8 x 10" card has a picture and the sound (letter) it stands for.

When the child has learned all eight sounds without the help of the pictures, he is ready to begin the primer, which uses only the eight familiar sounds plus 'I', 'yes', and 'no'. Learning the sounds and getting into the primer may take a long time and plenty of help from you, depending on the age of the child and how much he can absorb in one sitting. Our children were able to do this series successfully at eight years or so. Another excellent program by the Sullivan Associates who live in a land where anything can happen. The last three books, also in the form of self-teaching programs, are stories from Greek mythology meaningfully written for seven and eight year olds.

The material in every book is presented in a highly entertaining way; drawings by Carol Andrews are funny and colorful so that learning to read never becomes a drag.

The main characters throughout the series are Sam, Ann, the little brother Walter, Nip the dog and Tab the cat. The beginning books are about their daily adventures and how they get into and out of trouble. In the more advanced books, when the mob is looking for adventures they visit the Roundabouts who live in a land where anything can happen. The last three books, also in the form of self-teaching programs, are stories from Greek mythology meaningfully written for seven and eight year olds.

Cynthia Buchanan has also written a three-part series, *Programmed Geography (Macmillan)* including *The Earth in Space, Continents & Oceans, Latitudes and Climates*. Our children were able to do this series successfully at eight years or so. Another excellent program by the Sullivan Associates is *Programmed Astronomy (2 books)*.

[Suggested and reviewed by  
Gretchen Guard.]

## Cuisenaire Rods

The first rod is a small wooden cube with a 1 centimeter side. The second is twice as long with the same cross section. The third is three times as long as the first. Each length has its own color. With these rods, a child can learn arithmetical operations and mathematical relationships even though he recognizes no mathematical symbols. (Children are capable of grasping mathematical concepts before they have the mechanical ability to write. Therein lies one of the great advantages of Cuisenaire rods.) For example, if a child puts the first (white) and the second (red) rods end to end he can see that together they are equal in length to the third (green) rod. Once he realizes that a white and a red always equal a green, he has learned something quite general about addition and equality. If, later, the numeral "1" is associated with the first rod, "2" with the second rod and "3" with the third, he will be in a position to grasp at once that  $1 + 2 = 3$ . But the rods rather than the first, the truth  $1/3 + 2/3 = 1$  would also be forthcoming as "proved" by the general rule that the child discovered with the rods.

What is happening here is that algebra (the general case) is being learned before arithmetic (specific cases), as logically, it should be. This is undoubtedly one of the best pieces of teaching equipment ever invented. But it is important that you don't show children the truths that the rods demonstrate. They must be allowed to discover these themselves or it won't work.

[Suggested by Virginia Baker  
Reviewed by Jane Burton]

## Catalog free

Basic classroom kit for 25 kids \$59.95 postpaid  
Cuisenaire Home Mathematics Kit \$12.50 postpaid  
from:  
Cuisenaire Co. of America, Inc.  
12 Church Street  
New Rochelle, N.Y. 10805

Home Mathematics Kit available from  
WHOLE EARTH CATALOG

## Programmed Reading

Cynthia D. Buchanan  
Sullivan Associates.

Programmed reading: The pre-reading series, 3 bks. bk. 1, Programmed pre-reading, 1968, \$1.80; 2nd ed. 1984, \$0.92; bk. 2, Programmed pre-reading, 1963, \$2.40; bk. 3, Programmed primer, \$1.32; readiness test, \$2.80; teacher's alphabet cards, \$3.60; student's alphabet cards, \$1.94; sound-symbol cards, \$1.92; teacher's guide to Pre-reader, stage 2, 1968, \$2.72; teacher's guide to Reading readiness, stage 1, 1968 \$2.00.

Programmed reading, 2 series, 1963, series 1, 2 vols. vol. 1, Programmed pre-reading, \$1.48; vol. 2, Programmed primer, \$1.24; reading readiness test, \$2.40 per pkg. of 10; series 2, Programmed reading, bk. 1, \$1.32; teacher's guide, \$0.72.

Programmed reading, 21 bks. 3 ser. 1963-68, Teachers guide to ser. 1, \$2.40; bks. 1-2, \$1.50 ea; teacher's guides to bks. 1, \$0.72; to bk. 2, o.p. bks. 3-7, \$1.68 ea; teacher's guides to bks. 3-7, o.p. pupils response bks. for bks. 3-7, \$0.32 ea; test booklet, \$0.96; teacher's guide, \$0.96; placement test, ser. 2, \$8.00; guide to reading tests, \$0.32. 7 filmstrips set, \$30.00; teacher's guide to filmstrips, \$0.96; Series 2, bks. 1-2, \$1.50 ea; bks. 3-7, \$1.68 ea; bks. 8-14 ea; teacher's guide to ser. 2, \$2.40; pupil's response bks. \$0.32 ea; Webster master's bks. 8-14, \$1.60; sound symbol cards, \$4.40; alphabet strips, \$1.48; test booklet, \$0.96; teacher's guide, \$0.96; text films available; Series 3, bks. 8-21, \$1.50 ea; pupil's response bks. 15-21, \$0.32 ea; teacher's guide, \$3.20; test; \$0.96; teacher's guide to tests, \$0.96; bk. 15, 2nd ed. 1968, \$1.80; programmed reading evaluation set, \$130.00.

Programmed reading classroom starter set, \$167, \$360.00.

from: Manchester Road  
Manchester, MO 63062  
McGraw-Hill Book Co. 8171 Redwood Highway  
Princeton Road, NJ 08520  
Hightstown, N.J. 08520  
Novato, CA 94947



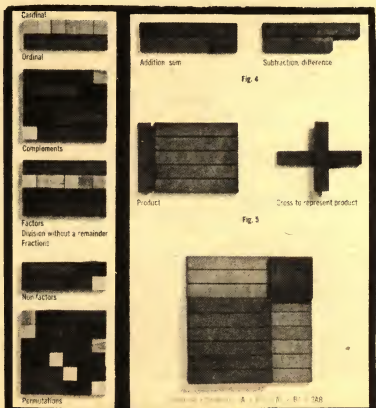
From back cover of  
**Winnie postpaid**

from:  
E. P. Dutton  
201 Park Avenue South  
New York, N.Y. 10003

Free literature about i.e. is also available from:

Foundation for Educational  
Technology  
World Building  
Silver Spring, Maryland  
20910

Ther was anuther litt sielens, and then  
he cauld down to yoo agen.  
"cristofer robin!"  
"yes?"



## Initial Teaching Alphabet

As everyone knows, the English language is inconsistent. For instance, here are four different pronunciations of the letter A:

ape apple arm all

i.e. eliminates all such inconsistencies by spelling with a separate symbol for each "a" sound:

æp appl arm aul

Eliminating contradictions in spelling and pronunciation makes learning to read and write a logical process. Anyone whose mind can grasp logic—and this includes three and four year olds—can learn to read with i.e. There are none of the complicated rules of the normal alphabet. Capitals i.e. are just the regular size i.e. symbols written or printed a little larger. Each sound has its own symbol; there are 44 altogether.

After learning to read in i.e., the switch can be made to the conventional alphabet easily. The irregularities are not troublesome at this point, because the reader can read whole words at a time—not letter by letter—and can read for content.

i.e. is great for pre-school age children who want to read. At that age, kids get frustrated easily. The i.e. alphabet prevents the frustration by its consistency. We taught our 4 year old the sound of i.e. letters. Then we showed him how words could be made by blending sounds together. It took a while before he was able to blend the sounds by himself. But when that happened, he was then able to read.

i.e. is also good for teaching English to foreigners (many foreign languages also have one symbol or one group of symbols for each sound) and for remedial reading instruction. It is also a good tool for writing: once all the sounds of the symbols are learned, one can write anything he can say.

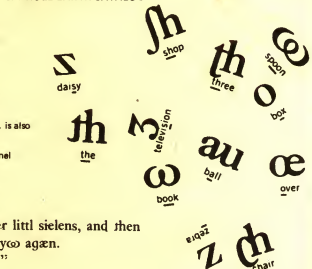
[Reviewed by Lora Ferguson]

**THE ITA Handbook for Writing and Spelling**  
Mazurkiewicz and Tanyzer  
1984, \$0pp.

\$2.00 postpaid

from:  
Initial Teaching Alphabet Publications, Inc.  
20 East 46th Street  
New York, N.Y. 10017

or WHOLE EARTH CATALOG



## Ladybird Books

I come from a family that reads a lot. I had two children, aged 5 and 6½ who could not read at all. I had pointed to their TOES and shown them all the Dolman words and read Beginner books and Dr. Seuss at them. One day on an acquaintance of ours came for a snack and brought his 5 year old daughter. She found the Beginner books and the Dr. Seuss and read them to us. We found out that she learned to read on Ladybird books. We started our kids the next day, September 17. By January 4 of the next year the first old was on book 5b, and the 6½ year old on Book 11a, that is, the younger child could read books of the Beginner book variety, and the older one could cope with just about any children's book. We read to them from the books for 15 hour each night, and answered their questions. We said to it that they got books that they were ready for them. That's all we did. So in 3½ months they learned to read, substantially by themselves.

"KEY WORDS... what they are, and how they are used. Some of the words in the English language are used more frequently than others. These words which appear more frequently can be called Key Words.

Research shows that twelve of their Key Words make up one quarter of all those we read and write. One hundred of them form half, and three hundred about three-quarters of the total number of words found in any normal reading. Reading skill is accelerated if these important words are learned early and in a pleasant way.

Write for details to the publishers: WILLIS & HEFORTH LTD.  
LOUGHBOROUGH Leics. ENGLAND

There are 36 small hard-cover books in all in the Key Words set, 3 1/2 each. The set, bought on the spot in East Africa cost 15 dollars and 50 cents. I think it is good value. The slip thing is that some of them are very British—"sweets" instead of "candy" for example. A similar set using Standard American or ghetto language would be very valuable.

There are more Ladybird books than this, about 240 altogether, all 3 shillings, all good value—stories, factual information, anything that kids like.

lost-her name  
Silver Springs, Maryland

## I Know A Place

Good simple idea, good simple book; pure mirror: you write and illustrate a book whose subject (not object) is you. Kids groove. Me too. —SB

[Suggested by Joni Miller]

### I Know A Place (Vols. 1,2,3)

Robert Tannen  
1969; 134 pp.,  
\$3.40 postpaid (20% off to schools) per set  
from:  
City Schools Curriculum Service, Inc.  
60 Commercial Wharf  
Boston, Mass. 02110 [Spanish edition is forthcoming.]

## I Know A Place

## I Know A Place

## I Know A Place



by  
and Robert Tannen

I know a person. A picture of this person is on the next page.

The name of this person is \_\_\_\_\_

The person was named \_\_\_\_\_

because \_\_\_\_\_

## Looking and Seeing

This series of 4 books was designed for use in British schools. They are absolutely first-rate.

As befits such books, they are filled with excellent illustrations and the text is very explicit. While it would seem to have the 12-16 year olds in mind, the books are packed with stuff of interest to anyone who wants to know about the visual world and isn't too proud to read simple English.

The author's view is,

We have learnt to exert a certain amount of control over our world, over our surroundings and the lives we lead within them. But although we have gained much we have probably lost even more. We no longer possess the knowledge and the understanding to judge the things we make: our houses and factories, our implements and machines, our cities and roads. Because of this failure in judgement, we often find ourselves surrounded with such ugliness as would have horrified men of past ages. . . . It is now more important than ever that we should learn to understand the basic laws of the world around us, the man-made world and the world of nature. (bk. 1, p. 2)

The illustrations are widely drawn, but are consistently relevant to man. Traditional crafts, modern building, technology, graphics, ergonomics, D'Arcy-Thomson-like discussion of structure, social influences and industrial design are all dealt with.

One small foible—not all the illustrations are fully identified, except in the teachers' handbooks which are put out as small companions to the 4 books. These also deal with the short exercises which are set at the end of each section in the books.

[Suggested and reviewed by  
David and Lynn Roessler]

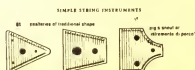
## Musical Instruments Made to be Played

Dryad Press in England has a series of craft books that may be particularly apt for school kids. Their *Musical Instruments* book has clear instructions and full-size plans for the fabrication of simple drums, shakers, xylophones, glockenspiels, dulcimers, psalteries, etc. Looks like fun. Other books of theirs we've seen include one on Netting (40¢) and one on Making and Playing Bamboo Pipes (\$2.70). —SB

[Suggested by Richard Raymond]

### Tuning and Playing the Bowled Psalter

The notes to which the strings should be tuned are given on the full size drawing on the inserted sheet. See also diagram 70 for the compass of the instrument. Tune the notes of the strings to the notes of a piano. In playing, rest the short side of the triangle against the body just above the left hip, and with the left hand, support the instrument towards the other end. Holding the bow in the right hand, bow the far end of each string. See plate 8. The clatonic scale of C is on the right. Reach over to the other side for the sharps and flats. It is necessary to lift the bow from string to string. True legato playing is impossible but it is easy to play sustained notes, and these are particularly acceptable when used with tuned percussion instruments.



### Looking and Seeing

Books 1-4

Kurt Rowland

1966; 130 pp. each

\$4.50 each postpaid

from:

Van Nostrand-Reinhold

450 West 33rd Street

New York, N. Y. 10001

\$1.56 from Blackwell's (see p. 2)

The same author has another excellent series, for younger children: 48 pp. each.

### Learning to See (Vols. 1-3)

1968

\$1.95 each (75¢ workbook for each available)

from:

Van Nostrand Reinhold

450 West 33rd Street

New York, N. Y. 10001

### Musical Instruments Made to be Played

Ronald Roberts

1965; 61 pp. and plans

\$6.50 postpaid from:

Dryad Press

Northgate, Leicester

ENGLAND

Wood Code, N. J. 07075

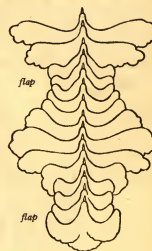
or WHOLE EARTH CATALOG



A pattern of instruments. In addition to showing many of the instruments described in the book, this photograph shows the frame and soundboard assembly of a Spinet and also a Fidel with its bow. Nearby lies the template for a viola back.



Both the pine cone, 3, and the dahlia, 4, have two sets of spirals. Count them and see if they are part of the Fibonacci series.



## PART SEVEN



### THE TRACE FORK NEWS

(reprinted from the *Bleine Herald*)

Well, I know a lot of you were disappointed that there wasn't any news last week. It didn't mean that nothing was going on. Something's always going on around Tree Fork and up and down Rockhouse Creek, but I just felt too bad last week to write it up. I've had a virus going on ten days now. I don't know what it is, but it sure makes you feel awful when you get it. I'm not plum over it yet but I do feel some better this week although I'm still not up to making a full report. This time next week I intend to be well enough to write half the paper full, but I'm going to take it kind of easy this week because I sure don't want any relapse of whatever it was that I've been down with.

Dolly Huff told me that Mr. and Mrs. Dayne Holcomb were down from LaPorte, Indiana over the weekend visiting her mother, who is 88 years old.

Aunt Eunice Bartlett and her son Denver went to Lexington to visit Ira Combs, who had surgery on his leg. They report the operation was a success and that Ira should be home in a week or two. Denver drove his new Chevrolet.

Mr. and Mrs. Joseph Cooney have also been to Lexington lately. Their daughter Sarah finished nurse's training at Good Samaritan Hospital and her parents went down to the graduation. Sarah is a registered nurse now. Seems like only yesterday she was here in high school, cheerleading. Congratulations, Sarah. Why don't you come on back home and be a nurse in one of our fine mountain hospitals? We need good nurses and doctors. We need all of our young people to come back home to live.

But it seems like there's just not enough opportunity here for young people any more. I'd hate to know the figures on just how many of our fine young people have moved away in the last few years.

(continued)



## The Psychology of Children's Art

An elegant masterpiece on an inelegant subject, children's art. And they mean young children ages two through ten. Rhoda Kelllogg, having analyzed some one million pieces of children's art, has categorized their early scribbling patterns into seven-  
ten consistently recognizable stages and basic shapes. She has found, and you'll see this with her through a startlingly clear picture essay presentation, that children from every part of the world go through the same artistic maturational stages in terms of the identical shapes, designs and symbols that they use. "If children everywhere are so alike, then it may be possible to build upon man's common heritage rather than to founder upon his differences." The Psychology of Children's Art is a visual treat and an educational rarity—it would be a welcome gift to new parents, old parents and non-parents.

[Suggested and reviewed by Carol Guyton Goodell]

## Creative Drawing

Ernst Röttger has a fruitful technique for graphic exploration (or any other kind). He gives the students a medium—usually very simple—and some harsh constraints—usually very simple—and lets them find their own way out of fresh air. I suspect that this kind of medium exploration is better the more "useless" it is. Good book.

—SB

[Suggested by Dr. Morton Grosser]

## Creative Drawing

Ernst Röttger, Dieter Klante  
1963; 143 pp.

\$5.95 postpaid

from:  
Van Nostrand-Reinhold Co.  
450 West 33rd Street  
New York, N.Y. 10001

or WHOLE EARTH CATALOG

Van Nostrand-Reinhold also has Röttger books on  
Paper Design, Wood Design, Clay Design.

## Creative Play Series



## Point and Line

Röttger/Klante Reinhold



In his early pictorial work, the child is just beginning to paint and draw animals. He also tries buildings, trees, flowers, boats, cars and airplanes. In child art, humans become animals when there are ears on top of the head instead of hats or hair.



## In the Kingdom of Mescal

a fairy tale for adults, with pictures, tuck somebody in, and read it out loud.

—jd



In the Kingdom of Mescal  
Georg Schafer and Nan Cuz  
1968, 70, 30 pp.

\$4.95 postpaid

from:  
Shambala Publications  
1408 5th Street  
Berkeley, California 94710

or WHOLE EARTH CATALOG

They were in a strange world of pools and craters. Here and there he saw tender green shoots. Clouds of steam rose towards the sky from gaping holes and it was raining, like on earth. Then they went on.

"If you still had the serpent Time in you," said the Lord, as they stood on another mountain top, "you would have to die and be born again as many times as there are drops of water in all the seas in the world. It would take that long before you could stand on this star with me."



## The Psychology of Children's Art

Rhoda Kelllogg with Scott O'Dell

1967; 110 pp.

\$10.00 postpaid

from:  
CRM Books  
1104 Camino del Mar  
Del Mar, Calif. 92014

or

WHOLE EARTH CATALOG

The mandala, a simple crossed circle, has always been one of man's favorite compositions. This is the finger painting of a three-year-old.



The critical period in child art is between the ages of five and seven.

The child who feels free to use the colors and basic shapes which please him will continue to flourish artistically when he moves into pictorial work.

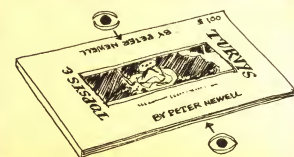


## TOPSYS & TURVYS

A fun little book for kids by Peter Newell with 74 drawings which are topsy-turvy.

[Suggested and reviewed by Gordon Ashby]

Available from:  
Dover Publications, Inc.  
180 Varick Street  
New York 14, N.Y.  
Paperbound \$1.00



## BLOWN LINES

A thick line drawn on the paper with India ink. By blowing sideways at the line the ink runs over the paper at random, producing bizarre patterns. What at first seems to be an aimless blue becomes quite controllable after a little practice. If a drinking straw is used for blowing, the stream of air is concentrated and easily aimed. Patterns can be influenced in many different ways—the distance of the straw from the paper, the angle at which it is held, blowing straight, crooked, evenly or in bursts or by moving the tube. The best way of exploring the possibilities is to begin by free experimentation, then the results achieved by chance should be brought under control and used consciously. The few illustrated examples show the enormous potential variety. Formal patterns of this kind have a unique character which is quite unattainable by drawing. If colour is also employed the number of possible combinations is greatly increased.



## Golden Handbooks

I think the handbooks and nature guides from Golden Press are wonderful, and by no means just for kids. They're economical in size and cost, intelligently researched and edited, well illustrated in color, thoroughly indexed with good bibliographies. In any of their subject areas, I'd start with the Golden Book.

—SB



**Weather**  
Paul E. Lehr, R. Will Burnett, Herbert S. Zim  
1957, 1965; 160 pp.

**Guide to Fresh and Salt Water Fishing**  
George S. Fichter and Phil Francis  
1965; 160 pp.

**Sky Observer's Guide**  
R. Newton Mayall,  
Margaret Mayall,  
Jerome Wyckoff  
1959, 1965; 160 pp.

\$1.25 each, postpaid

From:  
Golden Press Division  
Western Publishing Co., Inc.  
1220 Mount Dearborn  
Racine, Wisconsin 53404

or WHOLE EARTH CATALOG

Other books available from The Golden Press:

### Golden Nature Guides

Birds See Shells of the World  
Flowers Rocks and Minerals  
Insects Butterflies and Moths  
Trees Non-Flowering Plants  
Reptiles and Amphibians Insect Pests  
Stars Pond Life  
Mammals Zoon Animals  
Seashores Spiders  
Fishes Golden Fairy Guides  
Fossils Birds of North America  
Gamebirds Trees of North America  
Zoology Sea Shells of North America

### Seasonal Log

August is hotter than June even though the sun is more nearly overhead and the day is longest on June 22. In terms of solar radiation reaching the earth, May, June, and July should be our warmest months. But June, July, and August actually are. Why?

During the year the earth, as a whole, loses precisely the same amount of heat it receives from the sun. But as the sun moves north in spring, our part of the earth gains heat faster than heat is lost. On June 22 it is receiving maximum solar radiation. The heat gain continues to exceed heat loss until maximum warmth is reached, usually in late July. Heat gain continues to exceed heat loss, at a diminishing rate, until about August 31. Then our part of the earth starts to lose heat faster than it receives it, and begins to cool down. The process is like starting a fire in a stove: the roaring fire heats the room slowly, but the room will stay warm for a while after the fire has died down. The same heat lags account for the fact that the warmest time of day is usually about 3 p.m.—not noon, when the sun's rays are most intense.

### Weather

#### Weather will generally remain fair when:

The wind blows gently from west or northwest (p. 64).  
Barometer remains steady or rises (pp. 85-88).  
Cumulus clouds dot the summer sky in the afternoon (p. 20).  
Morning fog breaks or "burns off" by noon (evidence of clear sky above).

#### Rainy weather or snow may come when:

Cirrus clouds thicken and are followed by lower clouds (p. 88). (Particularly true if barometer is dropping.)  
There is a ring around the moon (pp. 17 & 88). (Particularly true if barometer is dropping.)  
Puffy cumulus clouds begin to develop vertically (p. 20).  
It is dark and threatening to the west (p. 85).  
Southerly wind increases in speed with clouds moving from west (p. 85).  
The wind—particularly a north wind—in a counterclockwise direction—that is, from north to west to south (pp. 85-88).  
The barometer falls steadily (pp. 85-88).

#### Weather will generally clear when:

Bases of clouds show steady rise to higher types (p. 85).  
The wind—particularly an east wind—shifts to the west (p. 85).  
The barometer rises rapidly (pp. 85 and 88).

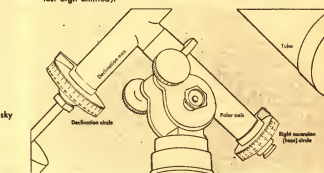
#### Temperatures will usually fall when:

Wind blows from—or shifts to—north or northwest (p. 85).  
Night sky is clear and wind is light (pp. 9 and 14).  
The barometer rises steadily in winter (p. 85).

#### Temperatures will usually rise when:

Wind is from south, particularly with cloud cover at night or clear sky during the day (pp. 9 and 88).

Effect of increasing power: At left is a 7" field in Cygnus as seen with 7500 binoculars. At right, centered on the same star, is the reduced and inverted field seen through a small telescope of about 35X. Numbers on map indicate magnitudes of stars (decimal point before last digit omitted).



Setting circles: With these, a telescope is easily aligned.

Sky Observer's Guide

In summer, the surface water warms to well above 32°F, and floats on the heavier water below. Mixing ceases, and lake stratifies into 3 layers. Fish are found in warm top layer, which is rich in oxygen, and a low in or near the middle layer, a zone of rapidly descending temperature. The bottom layer is cold and low in oxygen.

### HOW TO SURF CAST

Before attempting a cast with a revolving-spool surf reel, wet your line. This prevents it from burning your thumb on the cast. Shift reel into low speed and put thumb firmly on the spool. Let out 2 or 3 feet of line, and hold the rod pointed low opposite the direction of your cast. The sinker rests on the ground. Now bring the rod up with a powerful overhead sweep, pulling downward with your left hand and pushing upward with your right. As the sinker comes up the vertical, ease your thumb pressure and let the spool turn. Let the line run out under your thumb; removing your thumb will cause a back-lash, the sinker will strike the water, thumb spool heat. Surf spinning is done with some motions, using forefinger instead of thumb to control line.

### Fishing



Mr. and Mrs. Elmer Hampton from Cuthbert in LaSalle County visited his sister, Mrs. Ruth Gordon on Ten Mile creek two weeks ago.

Phyllis and William Sims have a new baby girl. Her name is Janell. Congratulations, Phyllis and William.

I didn't get to go to church the last two Sundays but Brother Bagby says attendance has been real good.

Hagen Banks made the honor roll at Morehead University the last semester. His mother, Theda, said this was the third straight semester Hagen made the honor roll. Hagen is going to summer school so he can finish college in three years. He is studying to be a biology teacher.

Sammy Kirk has been home on furlough from Fort Knox the past couple of weeks, but he has to leave Saturday for Vietnam. I know his mother, Mrs. Cinda Banks, will be here and she will be sad. Readers will remember that it has only been a little over a year since Cinda lost her husband Arlis in a mining accident. As the Lord watch over Sammy and return him safely to us may so possible.

Our community was saddened last week when Emmitt Collier died. Most people didn't even know that Emmitt was all that sick, till they took him to the hospital in Blaine. Leonard Godsey, who was a good friend of Emmitt's, said he was bad sick for a month or more, and that he tried to get Emmitt to go to the hospital, but he wouldn't. Emmitt lived by himself up at the head of Trace Fork and didn't get out much. I didn't get to go to the funeral but everybody that went said it was real nice. Brother Bagby officiated, and Dorothy Thornton sang. They buried Emmitt in the family cemetery up on the old Collier homestead. The road up Trace Fork's so bad any more they had to haul the casket in a sled.

Relatives at the funeral included Emmitt's nice Mercella, and her husband Doyle Magard, and their children, all from Cincinnati, plus Mercella's brother, David Ray, who was already here dying.

Lee Sergeant said that his neighbor, Mrs. Lois Pope's application for a Black Lung pension on her husband, the late Kermit Pope, has been approved, and that Mrs. Pope will soon begin to receive the monthly benefits. As far as I know, Mrs. Pope is the first in this end of the county to have her Black Lung application approved. But there are many more who ought to receive those benefits if justice is to be done to all of these whose health was destroyed working in the mines.

Well, that's all for this week. My head's starting to hurt again so I'm going to quit and go out on the porch a while.

## Andrew Lang Fairy Books

Everybody suggests these books, but nobody wants to review them, which I take as a good sign: it's too rich a bundle to bag. I haven't read the series; I have been paging through it, and it's clear the stories gathered and published by Andrew Lang (around 1905) are made of meat and potatoes and starvation and eagles and ladies and hermits and ogres and hard changes and not cotton candy. The turn-of-century illustrations by H. J. Ford are romantic.

[Suggested by Holly Bear]



THE BLUE FAIRY BOOK 37 tales 6 plates 130 additional illustrations x = 36pp 9" x 6" Paperbound \$1.95

THE GREEN FAIRY BOOK 42 tales 13 plates 10 additional illustrations x = 36pp 9" x 6" Paperbound 2.00

THE BROWN FAIRY BOOK 32 stories 30 plates, 6 in color 30 additional illustrations x = 36pp 9" x 6" Paperbound 2.00

THE YELLOW FAIRY BOOK 48 tales 22 plates 82 additional illustrations xviii + 212pp 9" x 6" Paperbound 2.00

THE VIOLET FAIRY BOOK 35 tales 41 plates, 6 in color 33 additional illustrations x = 36pp 9" x 6" Paperbound 2.50

THE RED FAIRY BOOK 37 tales 4 plates 90 additional illustrations x = 36pp 9" x 6" Paperbound 1.95

THE PINK FAIRY BOOK 41 tales 34 plates 30 additional illustrations x = 36pp 9" x 6" Paperbound 1.95

THE CRIMSON FAIRY BOOK 28 stories 43 plates 6 in color 10 additional illustrations x = 371pp 9" x 6" Paperbound 2.50

THE GRAY FAIRY BOOK 35 tales 32 plates 28 additional illustrations xiv + 36pp 9" x 6" Paperbound 1.95

THE LILAC FAIRY BOOK 33 stories 28 plates, 6 in color 28 additional illustrations x = 36pp 9" x 6" Paperbound 1.95

THE PURPLE FAIRY BOOK 28 stories 28 plates, 6 in color 22 additional illustrations xiv + 33pp 9" x 6" Paperbound 2.00

THE ORANGE FAIRY BOOK 33 stories 25 plates, 6 in color 33 additional illustrations xiv + 36pp 9" x 6" Paperbound 1.95



from:  
Dover Publications, Inc.  
180 Varick Street,  
New York, N. Y. 10014

or WHOLE EARTH CATALOG

Among the mountain pastures and valleys that lie in the centre of France there dwelt a mischievous kind of spirit, whose delight it was to play tricks on everybody, and particularly on the shepherds and the cowboys. They never knew when they were safe from him, as he could change himself into a man, woman or child, a stick, a goat, a ploughshare. Indeed, there was only one thing whose shape he could not take, and that was a needle. At last, he could transform himself into a needle, but try as he might he never was able to imitate the hole, so every woman would have found him out at once, and this he knew.

There was once a boy's son who told his father that he wished to marry.

"Someone has told the king that I have promised that a child shall be born this night in the palace, who can speak all the languages in the world and play every musical instrument. I am no magician to bring these things to pass, but he says that if it does not happen he will have me dragged through the city at a horse's tail till I die."

"Do not trouble yourself," answered the star, "my will manage to find such a child, for I am the king of the stars whose life you spare, and now I can repay you for it."



## Audubon

*I'd call this the strongest ecological-call-to-arms publication we've got. Its illustrations (both photographs and paintings) have visceral impact. The articles are thorough and authoritative. Audubon Society is no longer just birds but all life and it's into appreciation as much as protection. Like National Geographic, it's healthy just to have around the house. I keep thinking of the canary the miners kept for warning of poison gas.*

—SB

[Suggested by Ursula M. Vann]

**Audubon**  
Les Line, ed.

**\$8.50 /yr (bi-monthly) (membership \$10)**

from:  
Audubon  
1130 Fifth Ave.  
New York, N.Y. 10028

The fact is, however, that the sportsman's code of ethics just doesn't exist anymore. And if you don't believe it, examine the facts of a story that broke in *The New York Times* on Sunday, February 7th. And then watch the bang-bang books to see if they report this odious episode, complete with names and addresses of every hunter involved (which are readily available). If they do, perhaps there is some hope for the future of hunting.

The headline read, "35 Named in Raids on Bighorn Sheep," and the story told how rare desert bighorn rams were being slaughtered illegally on secret safaris into the Jacumba Mountains east of San Diego, California, not far from the Mexican border.

For fees as high as \$3,500 apiece, wealthy sportsmen from across the country—from Washington, California, Vermont, Oregon, Colorado, Idaho, Pennsylvania, New York, Texas, Oklahoma, Missouri, Hawaii, and Canada—were led into these arid hills to shoot an animal that has been totally protected in California since 1872. Three rams of the bighorn were slain, and two are on the U.S. Fish and Wildlife Service list of America's rare and endangered species.

Their guide, according to state and federal wildlife agencies, was a man who until recently had been a director (and a charter member) of the National Society for the Conservation of Bighorn Sheep, who had long been one of the organization's most ardent workers in helping better food and water supplies for this vanishing species, who for years had aided the California Department of Fish and Game on its annual bighorn census—and thus knew all of the rams' haunts.

And he not only led the expeditions, but he mounted the trophies at his own taxidermist shop. A raid there uncovered 31 skulls of bighorns, plus hides, copes, and one fully mounted ram. Forty more ram heads from the Jacumba herd have been seized by federal wildlife agents in hunters' trophy rooms in thirteen states and Canada.

The take? Thousands and thousands of dollars over a period of three years.

## Smithsonian

*The good old Smithsonian Institution has a new magazine, similar to Natural History, plus more Americana. Some very original articles.*

—SB

**Smithsonian**  
Edward K. Thompson, ed.

**\$10 /yr (monthly)**

from:  
Smithsonian  
420 Lexington Ave.  
New York, N.Y. 10017

Smithsonian

His chickens provide meat and eggs equally as good. The secret, Rodale is eager to reveal, is in their environment. They cluck contentedly in a chicken house unusually clean and almost odorless, thanks to another organic wrinkle. The chickens roost on a dropping pit primed with several layers of soil and rotted cattle manure. This culture, rich in bacteria, acts as a deodorizing agent on the droppings, which, as they are digested, provide a continuing source of loamy compost for gardens and fields.

Rodale also "fertilizes" with rocks and tin cans. In 16 Howard Avenue, in the 11,000-acre garden plots rimmed with low concrete walls, he has experimented with metals as growing aids, coming up with surprising results. For instance, he once planted string beans in all the cylinder-shaped garden plots, four were treated with tin, four with copper, and four with zinc. The results? The tin-treated area yielded 50 percent more beans—with higher vitamin content—than the control plots. Rodale borrows from the Chinese in growing vegetables among rocks. He bands to pull up a dump of parsley. Some of its roots cling to a rock, sucking out natural trace minerals, Rodale explains.



## Natural History

*The publication of the Natural History Museum in New York, this magazine covers wildlife, anthropology, science, archaeology, history, conservation, and more. It's always good, occasionally outstanding. Excellent bimonthly night sky map.*

—SB

**Natural History**

**\$7.00 (one 10 issues)**

from:  
The American Museum of Natural History  
Central Park West at 79th Street  
New York, New York 10024

The reef is perhaps the most complex community in all of nature, where plants and animals of infinite variety live together in seeming confusion. But even here there is an orderly balance and inter-relationship among organisms. The gorgonians provide concealment and shelter for fish, both hunter and hunted. Brittle stars and feather stars perch in their branches, and certain crabs and shrimps make their homes nowhere else. All the species of two important families of snails—the egg coarctes and the coral snails—prey exclusively on the polyps of various corals. But the most fantastic relationship of all is the partnership, or symbiosis, between minute plant cells and the corals and most other coelenterates, whose living tissue they inhabit. These plants, known as zooxanthellae, need the carbon dioxide produced by the animal, which in turn utilizes the surplus oxygen and food produced by the plants through a complex enzyme system, increase the coral's ability to deposit calcium carbonate and so make it possible for them to produce the vast framework of the reef.

South Vietnam approximates the size of New England; the area sprayed is larger than Vermont; the area bulldozed almost that of Rhode Island. While none of Vietnam's 43 provinces has escaped, some have been attacked heridically with particular intensity and frequency. Among these are the Rung Sat sagon in Gia Dinh Province southwest of Saigon, Tay Ninh Province (War Zone C), which is northwest of Saigon, and Long Khanh Province (War Zone D) northeast of Saigon—the last previously contained major stands of South Vietnam's magnificent virgin tropical forest.

Most forest spraying has been done with a 1:1 mixture of 2:4-D and 2:4:5-T. Agents Orange in military terminology; some with a 4:1 mixture of 2:4-D and picloram, or Agent White; and small amounts with dimethyl orange acid, Agents Blue. The use of Agent Orange was discontinued in early 1970, largely in favor of Agent White. Agent Orange was applied at the rate of 25 pounds of active ingredients per acre; Agent White at 8 pounds; and Agent Blue at 9.

## Naturalist Book Service

The North American Naturalist Bookstore  
Box 133, Plainfield, Vermont 05667  
"Postal access to readings in the natural sciences, natural history, and natural living".  
A very tasty selection of books, all written around better use of and appreciation for our natural earth home. It reminds me a little of the Whole Earth Catalog. Titles include Down the Colorado, Freezing & Canning Cookbook, The Sea Around Us, The Stalking books—everything from ants to ecology.

## One Million

Working familiarity with large numbers is an acquired skill. (Until this gig I could never handle a concept like "twenty thousand dollars" without sitting down—"How much is that in candy bars?" Or, this printing of the CATALOG is 600,000 lbs of paper; that's, let's see, 300 tons of cultural/ecological karma.)

This well-made book of dots and notes can make formerly impossible numbers reliable to each other and to life. It's fun. Godwork.

—SB

One Million  
Henrik Hertzberg  
1970; 211 pp.

**\$3.95** postpaid

from:  
Simon & Schuster, Inc.

630 Fifth Ave.  
New York, N.Y. 10020

or WHOLE EARTH CATALOG



This book is a yardstick, a ruler divided into a million parts instead of a dozen. The reader may use it to measure any quantity between one and one million: it will provide a visual equivalent thereof.

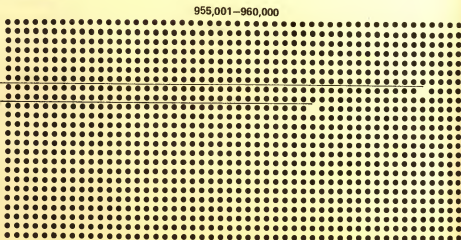
There are 5,000 dots to a page—10,000 on each double-page spread. The progression is marked, and a little counting and multiplying will yield the dot that corresponds to any number one likes.

Notes are scattered—like mileposts—here and there in the inside margins. Each note corresponds to a number, and the dot signifying that number is readily identifiable.

955,001—960,000

955,396—Dollars earned on costs totaling \$14,293 by Western Electric on a U.S. Government contract for checking over "launcher loaders"—a profit of 6600 per cent.

955,484—Vehicles recalled by automobile manufacturers in 1968 to check for potential safety defects.







## Living With Your Land

If you're a kid in a family that has some land this book will help you get family support for projects to encourage wildlife, improve the soil, build a pond, live up the place.

—SB

Living With Your Land  
John Vooburg  
1968; 191 pp.

\$6.95 postpaid

from:  
Charles Scribner's, Sons  
597 Fifth Ave.  
New York, N.Y. 10017  
or WHOLE EARTH CATALOG



## Exotic Aquarium Fishes

More than 70% of the Whole Earth's surface is under water, with proportional animate population, our ancestral home. Some people immerse themselves in this ecological dimension swimming. Others box a bit of it and stash it in their pads for observation, education, fascination, fun. Aquarists have been long aware of environmental balances and such, playing god. Aquariums are communes. How you keep your tanks will show you to be curious, careless, callous, compassionate, concerned, or what.

The dean of American aquarists is Dr. William T. Innes, whose classic manual with its exquisite color photographs, updated by assistants and now published cheaply, unfolds scientific insight, practical lore, dry humor, and humane wisdom.

(Suggested and reviewed by  
Tom Wertenbaker)

## Exotic Aquarium Fishes

Dr. William T. Innes  
1938-1966; 590 pp.  
\$5.95 postpaid  
from:  
E. P. Dutton & Company, Inc.  
201 Park Ave. South  
New York, N.Y. 10003  
or WHOLE EARTH CATALOG



"Missionary fish" would be a fitting name for this little beauty, for it far exceeds any other species in the number of convert aquarists it has made. And many of these converts who branched out and branched in a big very still keep Guppies, and still that, with their infinite variety of colors, they are the most interesting of all aquarium fishes. Each male is as individual as a thumbprint.

Besides its beauty the Guppy has other great merits. Scarcely any other fish combines so many cardinal points in such degree. It is a live-bearer, the most popular type of fish. It is an extremely fertile as well as dependable bearer. It is unusually active. It will thrive in close confinement. It can stand foul water. It has an extreme temperature range of 40 degrees, from 60 to 100. It will take any kind of food. It does not fight. It is not timid. It matures rapidly, an important point for those aquarists breeding for special points. It is subject to few diseases. It can be had everywhere at prices available to everybody.

The activity of the male is extraordinary. Whether flashing about in pure joy of living, or paying court to a female, he is ever the embodiment of intensity. He might well be termed "the playboy of the aquarium."

The specimens chosen for use in our color plate were selected with the end of illustrating certain color features. Five of these color standards are shown. The fish just below the head of the female displays two of them. He has the "Peacock" or "Lace" design in the tail. The fish in the lower left corner also embodies two definite points. First it is a "Chain Guppy." This refers to the irregular dark line from the head through the body. The eye in the dorsal also makes it a "Birdseye Guppy."

The large central figure, of course, is a "load" female. The gentleman creeps approaching from the rear is in typical position for action, with his gonopodium brought forward for an instant thrust.

In highly developed stocks some females appear not only showing traces of color in the tail fin, but also shiny highlights in it, as indicated in the single illustration. It is believed, but not certain, that such females throw youngsters of superior colors. Any color in female adds value to a show pair.

Sometimes an individual fish, possibly of a peaceful species, learns that other fishes will flee if chased. This becomes a sport with that fish, to the misery of its fellows and the discomfort of their owner. It should either be disposed of, partitioned off, (perhaps in a corner, on a dune), or placed in another aquarium with larger fishes, where, among strangers, it may reform. Like the rooster taken out of its own barnyard, it may not fight so well.

Inequality in the size of youngsters always puzzles the beginner. None can tell why it is any more than in human babies. Some fishes are no doubt born more vigorous than others. They get "the jump" by bolting the biggest and best food. Presently they become large enough to eat the smallest of their brethren. As these make the best of food, the disproportion increases. It is Nature's way. A plentiful early supply of the small live foods tends to equalize growth.

376 Nature Learning



Birdhouse construction is booming. Some factory and do-it-yourself sources are pressed to keep the supply in pace with the demand. People seem to want birdhouses as badly as the birds do. Here is a gratifying and constructive trend. Obviously the clearing of a million acres of land a year for the suburbs is having its effect on nesting practices. At a time when urbanization is depriving hole-nesting birds of nesting sites, it is but prudent to fill the gaps caused by the scarring of the countryside and the removal of old trees and fence posts. It is also wise to encourage population growth of useful and disappearing species, such as practiced by Dr. Heinz Meng of New Paltz, New York. To bolster the dwindling sparrowhawk population in his Hudson Valley area, he sets out large nesting boxes with entrance holes three inches wide. Thirteen of his 14 boxes were occupied in 1965.



## Lebitas reticulatus (PETERS)

Pronounced Le-bis-ties re-tik-yoo-lay-tus Popular names, Guppy and Rainbow Fish

MEANING OF NAME: *Lebitas*, probably from *Lebias* (=Cyprinoid), and *reticulatus*, reticulated, net marked, or mottled

Also known as *Girardinus reticulatus*, *Girardinus guppyi* and *Poecilia reticulata*

Trinidad, Guiana and Venezuela Length—male, 15 inches; female, 2X inches

Western Location Map x19 to A24

Artificially introduced into many other locations



"CORKSCREW" VALLINARIA

An attractive mutation from the tall *Vallinaria spiralis*, but instead of growing from 15 to 20 inches and sprawling on the water surface of small tanks, its charmingly twisted leaves average only 7 to 12 inches. Very popular. Prefers hard water and fairly strong light.

## Plants and Man

This is a terrific book about plants and agriculture. We haven't seen the other books in the Nature and Science series from Natural History Press, but if they're as good, they've got something. —SB

## Plants and Man

H. L. Edlin  
1960; 253 pp.

\$6.95 postpaid

from:  
Doubleday & Company, Inc.  
501 Franklin Avenue  
Garden City, N.Y. 11531

or WHOLE EARTH CATALOG



The six principal types of maize. (A) pod corn, a probable ancestor of modern corn; (B) dent corn; (C) flint corn; (D) popcorn; (E) flour corn; (F) sweet corn.

As food for humans, corn is inferior to wheat and some other cereals because it contains very little protein. The absence of protein means that cornstarch does not form gluten when it is mixed with water, and so corn bread has a rougher texture than wheat and rye loaves made from the "stretched" dough (full of air pockets) that gluten provides. Even so, corn has formed the principal diet of many peoples in Central and South America for several thousand years.

## Tropical Fish Essay

Dear Sirs:

Herewith is my essay about Tropical Fish for beginners. I obtained my information from The Innes Book of Exotic Aquarium Fishes. Copyright by Aquariums Incorp., Maywood, N.J. (19th Edition revised)

The hobby of tropical fish and plants is an old and fascinating one. The beginner however, must remember that he should start with the most simple and common types of fish to insure a successful project. The best fish for beginners to start with is the guppy. It is colorful, inexpensive, and easiest to breed. In fact, it is almost too easy to breed. Most hobbyists end up with more baby guppies than he can handle. So the best thing to do is to buy only one female, and have a dealer ready to receive the fish when you no longer want it. The next easiest fishes to have are the Mollies, and the Platys, orange or otherwise. They are lively and attractive and also inexpensive. But, if you are a beginner, do not attempt to purchase a soft-shell turtle, or frog or crab. My own experiences have led me to this conclusion. Soft-shell turtles are prone to a deadly disease known as fungus. Caring for a sick turtle is messy, hopeless, and uncomfortable for the turtle itself.

Water used in the aquarium should be treated with D-Chlor, which rid tap water of its chlorine content. Make sure that the water temperature stays between about 67 to 88 for the fish mentioned above, but for other types of fish, consult your dealer for correct temperature ranges.

The most common and cheapest plants are: Vallinaria, Cabomba, and Anacharis. Vallinaria should be planted with the roots above the gravel, or the plant will gradually decompose and pollute the tank. One of the most common problems arising in tropical fish "communities" is the act of over feeding. This is the big mistake that many young aquarists make. Feed only once a week, and once in a while twice. You will just have to overcome the joy of watching the fish devour their lunch, breakfast, snack, dessert, etc.

The other problem that arises is disease. If your fish is acting jittery, or lies down at the bottom of the tank, he most likely is ill. Treat him at once by placing him in a jar with about 1-2 teaspoons of salt, and 1 cup of water. (Float the jar in the tank) Then consult your dealer. But be sure you follow these guidelines: Do not overcrowd, do not overfeed, keep tank clean, keep the "Innes Book" on hand, keep temperature between 72 and 81, and always watch out for sick fish.

Submitted by  
Elizabeth Collins, age 12  
San Diego, California

## All About Telescopes

If you have been putting off building a telescope because you thought it was too expensive, too difficult, or too time consuming, this is the book for you. It is the next best thing to having a telescope building class from John Dobson of the San Francisco Side-walk Astronomers. A high quality astronomical Newtonian telescope (reflector) can be built in one weekend if all the materials are at hand. Most other books on telescope building make the whole process sound very complicated. Therefore, many would-be amateur astronomers get discouraged and give up before they get started.

This book has everything from basic optics to basic astronomy. The emphasis is on do-it-yourself and do it cheaply. Many different types of telescopes diagrammed. How about a "4x" beam? a reflecting telescope made from board? Old pipes, scraps of wood and metal, bottle caps, tin cans, cardboard tubes, etc. are the materials suggested for construction various parts of telescopes. Extremely informative diagrams give you many ideas for doing things in different ways. This book will take you from grinding and polishing your own mirror through building mounts to using your telescope. One of the best illustrated how-to-do-it books ever written.

[Suggested and reviewed by Kenneth R. Lajole]

All About Telescopes  
Sam Brown  
1967, 192 pp.

\$3.00 postpaid

from:  
Edmund Scientific Co.  
555 Edgemoor Bldg.  
Barrington, N.J. 08007

## Amateur Telescope Making

You left out the best books on telescope making, namely Amateur Telescope Making. The set (I, II & III) are \$5, \$6, \$7 from Scientific American Publishing. It gives explicit directions for making and designing almost any telescopic system—from 6" wooden mounted reflectors to Schneider optical systems on cast aluminum forks. They write even of how to set up your own foundry to cast the mounting. Much practical, some theoretical information, some history. One particularly impressive photo is one of a window, looking like a normally exposed photograph. Reading the text, it was Schneider's first photo with his newly designed camera, taken from two miles away in starlight with a two hour exposure. Then they tell you how to make a better camera than that. Sort of a make-your-own-trip-through-the-universe book.

Love,  
Barry Oliver  
Austin, Texas

## Sourcebook on the Space Sciences

If your plan includes getting off the planet, and you don't care to be just an inert passenger or dumb tourist, this book is the most useful—if a little out-of-date—single volume you'll find. Rockets, orbits, propulsion, guidance, Earth as planet, other planets, sun, extraterrestrial man. When you get out there where Nothing is, say hello to it, will you?

[Suggested by E. G. Valens] —SB

Sourcebook on the Space Sciences  
Samuel Glasstone  
1955; 537 pp.

\$9.95 postpaid

from:  
Van Nostrand-Reinhold  
450 West 33rd Street  
New York, N. Y. 10001

or WHOLE EARTH CATALOG

SOURCEBOOK ON  
THE SPACE SCIENCES

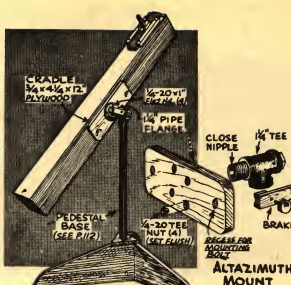
INJECTION  
POINT

HYPERBOLA  
(OR PARABOLA)

ELLIPSE

EARTH

If a spacecraft is launched near to, i.e., within a few hundred miles of, Earth's surface into an elliptical orbit that extends out to 10 Earth radii,  $R_{\text{Earth}}$   $R_{\text{Earth}}/2R_{\text{Earth}}=1/2$ ; the required injection velocity ( $v_{\text{inj}}$ ) is then as much as 95 percent of the escape velocity. For a launch to the Moon, some 60 Earth radii distant,  $R_{\text{Earth}}/2R_{\text{Earth}}=1/2$  and the injection velocity is over 99 percent of the escape value.



## The Observer's Handbook

For those who like to stare stars straight in the eye, this is the best amateur astronomer's handbook. Asteroids, clusters, constellations, eclipses, galaxies, planets, nebulae, occultations, radio sources, precession, star maps, sun spots, meteors. Published annually in November.

—SB

[Suggested by Lee Anderson]

## The Observer's Handbook

\$1.50 postpaid

from:  
Royal Astronomical Society of Canada  
252 College Street  
Toronto 25, Ontario  
CANADA

## The Attractive Universe

Soundly written, brilliantly illustrated guide to the interactive dimension of gravity. If I were orbiting the moon, I'd want my understanding to be able to swim in this element like a fish.

—SB

The Attractive Universe  
E. G. Valens  
1969; 197 pp.

\$5.95 postpaid

from:  
The World Publishing Company  
2231 West 110th Street  
Cleveland, Ohio 44102

or WHOLE EARTH CATALOG



If we allow Star B to orbit for a longer time, something else occurs. Star B is falling into an elliptical orbit, but in addition, Star A itself begins to move. Why?

Star B responds to a bending of space caused by Star A. But Star B itself, by virtue of its very existence, causes an additional curvature in space, and this in turn affects Star A. Furthermore, Star B is moving, and it literally carries the additional curvature along with it. The shape of space is now changing constantly and the originally stationary star is thus set in motion.

## Catalogs of Astronomical Photos

all kinds of space pictures  
pretty cheap (night by ten,  
a buck fifty or so).

—jd

A montage of six GALAXIES with HGC numbers and classifications, as follows:

HGC TYPE HGC TYPE

1201 50 2641 50

8811 50 3023 50

488 Sub 2648 50

Can. No. 797

REED-SCARF COMET:  
five images, on a single print,  
taken April 28, 27, 30,  
and May 1, 1957, 100-100.

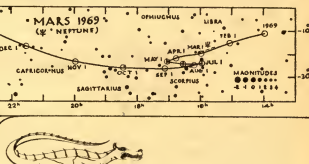
VENUS: Six views in ultraviolet  
by James Van Allen  
and July 1, 1957, 100-100.

Catalog  
free

from:  
California Institute of Technology  
Bookstore  
1201 East California Boulevard  
Pasadena, California 91109

Catalog  
free

from:  
Lick Observatory  
University of California  
Santa Cruz, California 95060



DEAR ESTELLE

I've written you about fifty pages of letter since I've seen you but it's too big a mess to send. Some time I want to read those pages to you, or let you read them, and I'd like to talk to you a long time about what's in them. Some amazing things have happened since I didn't see you in Cincinnati any more and it's probably been the same for you. It seems like adventures keep on happening to me and you, and most of the people we know, even when we don't particularly want to have adventures for a while.

What I want to do, Estelle, is get together and talk it out. I want you to come here where I am, and be with me a good, long while, and let's get into it again and see what happens this time. That's what I want to do. If it's necessary, and you want it that way, I'll come where ever you are. I want to hang here a while, but I want to go to you more than I want to stay here, so if you want me to come where you are, just say so.

But let me tell you a little about this place, Estelle. Let me tell you how it is here.

Mainly, it's very quiet. It's not so lovely to look at because this is coal mining country, and the hills have been pretty much fucked over, but in its way this is the loveliest place to be that I've found in a long time. Of course I always thought it was lovely. I use to be around here a lot when I was a kid, and I've got a lot of sweet kid memories of how it was in those years. But the way it's lovely now doesn't have anything to do with memory. I'm surprised that it's that way. It seems very far off to be looking at this place from such a different angle. But I'm not spending much time on my surprise. I'm too involved in the other loveliness that's here that I can't describe very well, but that I feel really strongly.

What's here is an old house, and an old barn, both of them ruined. There's a small garden that's not ruined, and water piped down from a spring. There's some chickens, and there's just one hell of a lot of rabbits living in hutches up by the barn. Most people would consider this a pretty grim and worthless place, but it holds a very large value for me that I haven't got completely figured out yet, but that emotionally I feel like I've got a pretty good hang on. There's no electricity, and you can't get a car up here, but those are both pluses as far as I'm concerned. I'm writing to you right now by the light of a cool oil lamp, and that's plus. In a few minutes I'm going to go out on the front porch and sit in my uncle's rocking chair and look at the stars and feel the cool and enjoy this quiet Kentucky evening and that's a plus for sure.

But the really big plus would be if you were here with me. I want you to be. At the least, I want you to write to me and tell me where you are and that you're okay. I'll worry about you till you tell me. I'm pretty bored with worrying about myself so much, but I'll worry about you till I hear that you're okay. So please write to me just as soon as you possibly can.

Love,

D.R.

Astronomy 377  
Learning







Seedtime On the Cumberland  
Harriette Simpson Arrow  
1960, 448pp.

\$8.95 postpaid

from:  
Macmillan Company  
866 Third Avenue  
New York, New York 10022

or WHOLE EARTH CATALOG

*Miss Arrow combines her talents of novelist and historian in Seedtime to produce a beautifully written account of life among the settlers on the Appalachian frontier. Her geographical focus is the Cumberland River drainage, which begins in Eastern Kentucky and sweeps southward into middle Tennessee. The book is loaded with details of frontier life-style which provide pictures not only of the pioneers' daily life, but their psychology as well.*

—Gurney Norman

Von Graffenried had chosen his people carefully, so that most needed skills would be represented, as many were required. There had to be carpenters, joiners, plasterers, and sawyers in order to build the only kind of home they knew to build on the rockies, claystone coastal plain—one of sawed timber. This, in addition to skilled workmen, demanded saws, hammers, nails, trowels, chisels, shingles, and time that had to be got from the burning of oyster shells.<sup>42</sup> Such a house took time in the building that might have gone to clearing fields and fortifying against the Indians, and during the long weeks of its building the owner and his family had to live in some makeshift shelter such as a tent or even house of bark and bough, thereby increasing their liability to illness through exposure to rain and cold.

The man who could with felling ax, broadax, drawing knife, auger, and frowe into the woods and in a few days' time build an all-weather house of logs in which he could live decently, and in comfort when it was finished, was not there. The "house made of logs such as the Swedes very often make in America,"<sup>43</sup> was still very much a rarity on the Carolina coast.

The New Bern settlers had brought plenty of clothing, but soon they were almost naked. They had when food got low, basted clothes with a nearby tribe of Indians for "wild meat, leather, bacon, beans, and corn." Less than a day's journey away there were game-filled woods, but there were no hunters in New Bern, and nobody to teach hunting.<sup>44</sup> There were in New Carolina at that time famous hunters, who could, wearing the head and skin of a deer, stalk the living animal until they could get close enough for the kill, but these were Indians.<sup>45</sup> The white hunter, so proficient he could make money from the selling of skins, was not yet in America, the New Carolina planters paid the Indians to hunt for them.

Skills alone were not enough; it is true any man who would survive on the border had to be an artist in the use of the broadax, skinning knife, scraper, hoe, frowe, auger, ax, adz, and other tools, but equally important or more so was a knowledge of the woods. All borders who lived as farmers were woodsmen. The forest was not only enemy to be pushed aside for cleared fields, it was for the Virginia or New Carolina settler a vast and seemingly bottomless widow's barrel yielding up all manner of things from walrus for the newborn baby's tea to dogwood for the weaver's shuttle. The settler had to know these offerings, where to hunt a slender hickory sapling for the corn pounder saw, lighthouse for a bit of tar, cane stalk for the weaver's sleigh, a small and crooked white oak for a sled runner, but a straight one for a splitting maul. He had to know where to find haws and haws for the axe and cedar for riving, and so for several dozen, what would sink and what would float, what would bend, and what was back for a shoe. The life in the living animal until they could get close enough for the kill, but these were Indians.<sup>45</sup> The white hunter, so proficient he could make money from the selling of skins, was not yet in America, the New Carolina planters paid the Indians to hunt for them.

Years ago before the days of consolidated schools and good roads, I taught in remote sections of Pulaski County, Kentucky now part of the Cumberland National Forest. My pupils were chiefly the children of small farmers, but all around them were the woods. At that time in that community most farm animals were still on the open range so these children like earlier generations spent much time in the woods, in rounding up the forest's straying animals, in going to church, school, or to a neighbor's, and in collecting herbs, fruits, nuts, fuel, and in hunting and trapping.

They had had no nature study or lessons in woodcraft, but on a Monday morning they told, with no apparent study of the ether muddy or dusty road, tell of what they had ridden or walked by the schoolhouse during the weekend, for they knew every shoe print, mule and horse "dip" in the neighborhood. They knew the common names as well as of several dozens of plants,<sup>47</sup> and they knew them winter as well as summer. One faint clink of a distant bell and they could tell whether made by horse, cow, or sheep, who owned the animal and what it was doing, grazing or sleeping or "hid-out." They could track a stray mule or hog or cow for miles when there were no tracks I could see.

They, no different from the young hunters of earlier generations, ranged over rough lands and were never lost or hurt. They delighted in swinging out over creek or river and dropping into a pool of water; they climbed tall trees, explored sinkholes, caves, creek pools, rockhouses, yet I never had a school child hurt by a fall or suffer a snake bite, and though many of the boys started hunting alone at ten years of age I can recall no gun accident. Bred into them was the same caution the hunter had to have: a perch in the swaying top of a "limb" fifty-foot history, made for good safe fun in a high wind, but only a fool would on a hot summer day stick his hand under a rocky ledge or into any hole where he could not see—that was a good place for copperhead to be. They were forever cautious; they respected the woods, the caves, and the river as one's quietest honorable enemies; young children were constantly watched and guarded against the dangers there, and it was not until they were eight years old or so they were allowed to walk the paths alone.



Cabins In The Laurel  
Muriel Earle Sheppard  
1966, 313 pp.

\$7.25 postpaid

from:  
The University of North Carolina Press  
Box 2268  
Chapel Hill, N.C. 27514

or WHOLE EARTH CATALOG

*Cabins in the Laurel is a record of Mountain life in Western North Carolina during the 1930's. The area has changed in this past 40 years; only small pockets of the old simple life remain but what there is is now knowing about. At first you might take it for Americana or funk, but you soon see that the people are really far out. There is a ballad in there sung by a woman named Frankie Silvers. The song is her answer to her executioner's question: "Do you have any last words?" There is a portrayal of an ecstatic scene inside a Holiness church wherein a woman becomes a saint by dancing and walling until the congregation joins her. These are true stories.*

[Reviewed by Dave Smith]

## On Heroes

*Don Boone had a land fantasy. He wanted to cut loose from the straight life of the settlements and go live someplace that made a greater demand on his talents and creative energies. He didn't like the economics of the settlements. Too much usury, too many men in debt, too hard to get out. His style and temperament were thwarted by people dealing only in the safe and known. The people in the settlements, the good burghers, were so bent on insulating themselves from the dangers of the unknown, they wound up insulating themselves from the pleasurable possibilities as well. In an essay the poet William Carlos Williams describes Boone as "a great voluntary born to the American settlements against the niggardliness of the damaging puritanical tradition." Boone was a socialist, desperate to engage the raw, natural world directly. As a man of his own time, Boone performed the classic act of the truly modern person: he embraced the new world of possibility that lay before him, and didn't look back.*

*People who are truly of their own time are the result of a process, children of an evolutionary working that cannot much be hastened by artificial means. It took 150 years to produce Boone and the Long Hunters, men capable of looking at the wilderness face to face without flinching, without glancing back to the settlements, and to Europe, for assurance. They were the products of what Harriette Simpson Arrow, in her book Seedtime On The Cumberland, calls "the long learning." The long learning was a period of time when generations of the original coastal settlers gradually learned to get along away from the sea, farther and still farther inland. Gradually the grandchildren and the great-grandchildren of an ocean-oriented people came to acquire the skills and attitudes a mountain man had to have. It was a slow and reluctant process, but by degree, individuals were formed whose growing expertise in the woods matched the waning of their interest in the old world of their fathers.*

*There are many factors that accounted for this early "generation gap," but the crucial one was the willingness of the wilderness to leave from the Indians. People before Boone's time went on expeditions in the woods, of course. But always with Indians as their guides. They hired Indians to hunt and track; it was nearly a hundred years before it began to occur to the coast-dwellers that they might learn the Indian skills themselves. Williams says of Boone, "To Boone the Indian was his greatest master. Not for himself surely to be an Indian, though they eagerly sought to adopt him into their tribes, but the reverse: to be himself in a new world, Indianlike. If the land were to be possessed it must be as the Indian possessed it."*

*And so the metaphor is inescapable: today's middle-class consumer culture as a Mother Country to cut loose from; then a period of long-learning, in which modern frontiersmen gain the individual competence that allows them to do the necessary, practical things. Indians were the original teachers. They are with us still, their ways and attitudes remain as models, to emulate and learn from. But today they are joined by others who qualify as "Indians" of a sort, by virtue of their skills which allow them to function as teachers, as shamans, as knowers of The Way. Certain thinkers, certain mystics, certain far-out entrepreneurs, qualify, but so do certain small farmers and artisans, aborigines of a kind, native to their places, there on the land to be learned from by modern Long Hunters willing to range beyond the settled places in search of education and adventure.*

*The Long Hunter is the hero of his time, in any age. He is himself in a new world, Indianlike; sensuous in his relationship with the natural world around; one who has left the Mother Country intent upon being of as well as in whatever wilderness he encounters. I'm sure that's an oversimplification, but at least it's a handle on the definition. And definitions are important. As the new world unfolds around us, so a new mythology comes into being, peopled with new heroes, and new styles of heroic behavior. In trying to arrive at a new heroic definition, it's helpful to read the lives of heroes who have gone before. Seedtime On The Cumberland is filled with tales of heroes. The thing you begin to realize as you read about them is that in most cases they were in actuality complex, mortal people like you and I who simply rose to the occasion that called for their aid, and did what they were called upon to do.*

—Gurney Norman





## Indian Crafts and Lore

If Boy Scouts and Germans make better Indian gear than most Indians it's true: ask at any powwow, this book may be why. Thorough research and splendid illustration trip you right on in. Good book.



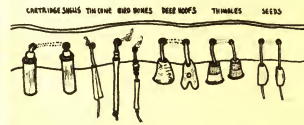
—SB  
Indian Crafts and Lore  
W. Ben Hunt  
1954; 112 pp.  
\$3.95 postpaid

from:  
Golden Press, Inc.  
Western Pub. Co.  
1220 Mound Ave.  
Racine, Wisconsin 53404  
or WHOLE EARTH CATALOG

## Good Medicine

A series of booklets with how-to info and worshipful flavor, from:

Adolf Hungry Wolf  
P.O. Box 1424  
Golden, British Columbia  
Canada



## Indian Craft Materials

Grey Owl has mainly inexpensive, wide range of quasi-authentic stuff for making Indian outfits. Good selection of records. Catalog free.

[Suggested by Pam Wright]

Four Winds has what looks like genuine Indian goods—moccasins, cradle boards, baskets, jewelry, etc. Catalog is an unillustrated mimeographed list, costs 25¢.

Del Trading Post supplies authentic raw materials for American Indian crafts, particularly northern plains. Excellent selection of beads. Catalog 25¢.

—SB  
DEL TRADING POST has been in business over 13 years. Through the years our customers have mainly been Indians and Indian lore enthusiasts but with our listing in the Whole Earth Catalog our clientele has broadened to include a wide range of people. We appreciate the increased business these "new people" have provided, but please remember, we are not Warriors or Stars and we don't want to be. Del Trading Post is still basically a one man operation, "I get by with a little help from my... wife." I'm in this business because I enjoy it. If I wanted to work and make money, I would have stayed at General Motors.

Peace,  
Dennis Lessard

Del Trading Post  
Mission, South Dakota 57555

41) **TRADE PAINT**—An early trade item used for coloring buckskin, painting parchies, war shirts, pictographs, etc. They can be used dry or applied with a fixative depending on what you are painting. Our colors are exact duplicates of the old colors and are the finest powdered pigments available. Colors available: Vermilion, Yellow, Green, Blue, Black, White, Verdigris (blue-green), Brick red (this is the color of red earth paint), and Ochre (this is the color of yellow earth paint).

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62) **CATLINITE PIPES**—Genuine Indian made "T" style red pictograph pipes with wooden stems.  
Large, approx. 26" overall length — \$25.00  
Medium, " 20" — 15.00  
Small, " 14" — 10.00

## North American Indian Arts

Another excellent little book from Golden Press, illustrating as well as anything I've seen that Art and Technology are one in original North American cultures.

—SB

### North American Indian Arts

Andrew Hunter Whiteford  
1970; 160 pp.

\$1.25 postpaid

from:  
Golden Press, Inc.  
Div. of Western Pub. Co.  
1220 Mound Avenue  
Racine, Wisconsin 53404

or WHOLE EARTH CATALOG



**CHIPPING** techniques were used to shape flint and other dense, smooth-textured stones into weapons and tools. Techniques are described below.

**PERCUSSION CHIPPING** produces all flakes with a sharp blow. The direction and force of the blow determines the size and

shape of the flake. Stone and other batters are used in direct percussion (1). A rest (2), to hold the flint in place, improves control. Indirect percussion (3) is used to strike off long blades with accuracy.



**PRESSURE CHIPPING** is used to shape and finish fine stone implements. A chipping tool of bone or antler (4) is pressed against the edge of the flint, breaking a small flake from the opposite surface (5). A chisel (6) may be used for increased pressure.

Secondary flaking is a finishing process (7). Rough flakes are retouched to even the edges and to give the blade a uniform thickness. Pressure flaking is also used to form notches and barbs. The point may be held in the hand (7) or on a support (8) with a cushion of leather used for protection.

Flaking with a notched antler (9) or prong (10) removes minute flakes from the edges of points and knives.



Grey Owl  
Indian Craft Manufacturing Co.  
150-02 Beaver Rd.  
Jamaica, New York 11433

IC-104(DV) **FRENCH BRASS BEADS**: The real SOLID BRASS beads, and burnished to a high polish. Large opening for thong. Use for necklaces, chokers, bracelets, etc. 1/4" per 100—\$17.50 Per 1000—\$27.00

French Brass Beads



## Indian House Records

Excellent LP recordings of American Indian Songs are available from INDIAN HOUSE, Box 472, Taos, New Mexico 87571. Each album contains representative songs from one tribe or one culture area. Some of the artists now on this label are: Nantaho, Taos, Ponca, Kiowa, Comanche, Kiowa-Apache, and Creek.

All sounds are recorded and produced on modern high fidelity equipment by Tony Isaac, the proprietor of INDIAN HOUSE and longtime collector of Indian music. Isaac has had many years of field experience recording Indian music on various reservations in the US.

An album titled, "Sounds of Indian America, Plains and Southwest", will be released shortly. This very inclusive album will have music that was recorded at the large Gallup Inter-Tribal Ceremonial, Gallup, N.M. The folding jacket will contain a color booklet with numerous photos and notes covering each of the ceremonial dances.

Sincerely,  
Frank Turley  
Santa Fe, New Mexico



IH 2501 Handgame of the Kiowa, Kiowa Apache, \$5.00 and Comanche

Comanche Handgame vs. Billy Goat Hill  
23 handgame songs sung by these two teams during an actual game. More than 60 singers. Recorded live at Carnegie, Oklahoma. Introductory notes on jacket.

IH 1001 Round Dance Songs of Taos Pueblo—\$5.00

Volume One  
16 Taos round dance songs sung by John C. Gomez, Orlando Lujan, Ralph Lujan, Benny Mondragon, Ruben Romero, and Louis Sandoval. Recorded at Taos Pueblo, New Mexico. Introductory notes on jacket.

## Catalog of Indian Books

\$1.00 from:  
The Ceremonial Indian Book Service  
P.O. Box 1029  
Gallup, New Mexico 87301

Best mail-order source for Indian Books I've been able to find. They have over 2000 titles listed. Nice to deal with. Is an activity of the Inter-Tribal Indian Ceremonial Association.

Cal Knight  
Pocatello, Idaho



## PEOPLE AT THE STORE

When D.R. went in the store to mail the letters to Estelle and the Anasazi Fleish, Mrs. Thornton saw him and headed him off at the bread rack.

"Well I'll swear," she said. "Look who finally came down off the hill."

"Hello Mrs. Thornton."

"Hello yourself! I what I say," said Mrs. Thornton. "What have you been doing all week, anyhow, hibernating?"

D.R. laughed and blushed a little and scratched his head. "No man, I've been working pretty hard."

"I'll bet you have," said Mrs. Thornton. "Sorting through Emmitt's stuff I bet. God rest him."

"Yes man. Trying to clean up a little. And keep his animals fed. There's a lot of work to do up there."

"I know just what you mean," said Mrs. Thornton. "It took us over a week to go through Wheeler's daddy's things when he died. We couldn't figure out what to do with it all."

"Is that him," said a man's voice behind Mrs. Thornton.

"This is him," said Mrs. Thornton. And then to D.R. she said, "We've been talking about you, young'un. Come over here and meet some people."

The men who had spoken was a pale and nearly bald fellow sitting in a wheel-chair. Grinning, he rolled himself outside of the little circle of chairs where the other people were sitting and came forward to meet D.R. and Mrs. Thornton.

"I'm Barry Barry," the man said. "I'm proud to make your acquaintance."

"Barry's the new correspondent for the county paper," said Mrs. Thornton. "He was asking me questions about you. I don't guess you've seen this week's paper yet have you?"

"No men, I haven't," said D.R.

"Barry wrote you up," said Mrs. Thornton, and turning then she called out to Mrs. Godsey, who was in the post office cage in the far corner of the store, "Is this a copy of the paper around anywhere, Mrs. Godsey?"

"Is that what, honey?" Mrs. Godsey called back. She was reading someone's post card and did not look up when they replied.

"The paper. David sent sent Barry's article to it you."

"I've got it in yonder," said Mrs. Godsey, still without looking up. "I'll get it for him when I get done here."

"Oh, Godsey! I wish you he'n after while," said Mrs. Thornton.

"I'd like to see it," said D.R.

"Well," said Barry. "It wasn't much, actually. I've been down with some kind of virus lately, and I didn't write much news. It was just a little mention about Emmitt was all. I sure was sorry to hear about Emmitt. I'm going to miss him a lot."

(continued)

Indians

Learning

381



who loned it through the streets of Idaho seeking visionary indian angels who were visionary indian angels . . .

—Ginsberg, How!

The booklist that follows comes from two intense informal years (and five-slack ones) hanging around Indians, reservations, anthropologists, and libraries. Long may Indians, reservations, anthropologists and libraries thrive! They gave me more reliable information, and human warmth, than dope and college put together.

I'm sure that the books all by themselves cannot deliver The Native American Experience. For that you need time immersed in the land and neighborly acquaintance at least with some in fact Indians. Still, an amazing amount is in the books.

## Book of the Hopi

If you're susceptible to tarot or astrology, you'll probably revel in this book. Its business is the esoteric and historical drama which lives and protects the Hopi Indians in Arizona. They were possibly the farthest out of the American tribes (in present times they are not as together as Zuni, or Tano, but they are larger and so is what they attempted). This is the mysticism of change but of stability, of the year cycle, of one more winter of food obtained by the hard knowledge from uncounted prior generations of winters and, they say, travels from world to world and place to place to arrive finally at the present. These bleak masses, to here sustain forever responsibility for the well-being of the world. Frank Waters was perhaps too eager to write a Bible, but I can't blame him. It's that kind of knowledge.

—SB

## Book of the Hopi

Frank Waters,  
Oswald White Bar Fredricks  
1963; 423 pp.

\$1.25 postpaid

from:  
Ballantine Books, Inc.  
101 Fifth Avenue  
New York, New York 10003

or WHOLE EARTH CATALOG

So the people emerged to the Second World. Its name was Tokpa Dark Midnight. Its direction was south, its color blue, its mineral *gacholish*, silver. Chiefs upon it were *salavi*, the spruce, *kwaahu*, the eagle, and *kolchivay*, the skunk.

It was a big land, and the people multiplied rapidly, spreading over it to all directions, even to the other side of the world. This did not matter, for they were so close together in spirit they could see and talk to each other from the center on top of the head. Because this door was still open, they felt close to Sotuknang and they sang joyfully praises to the Creator, Talawa.

They did not have the privilege of living with the animals, though, for the animals were wild and kept apart. Being separated from the animals, the people tended to their own affairs. They built homes, then villages and trails between them. They made things with their hands and stored food like the Ant People. Then they began to trade and barter with one another.

This was when the trouble started. Everything they needed was on this Second World, but they began to want more.



Parrot Clan maiden  
sitting on a pile of  
seeds during  
Soyá Ritual.

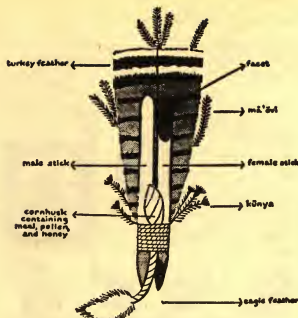


Figure 55. Male and female piko

Every piko, simple or complex, is made with prayerful concentration and ritually smoked over. When it is carried to a shrine where it is stuck in a cleft of rock or hung on a bush and left until the invisible vibrations of the prayer it embodies are slowly absorbed by the forces of life to which it is dedicated.

## The Lost Universe

The book has anthropological rigor along with its very unusual completeness. Here is the whole life of the Pawnee, told in a way that you could go now and live it. Here are old solutions to problems we consider unsolvable and new.

—SB

## The Lost Universe

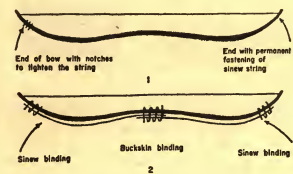
Gene Weltfish  
1966; 67 pp.

\$1.65 postpaid

from:  
Ballantine Books, Inc.  
101 Fifth Ave.  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

The Pawnee child was born into a community from the beginning, and he never acquired the notion that he was "cloaked in" "within four walls." He was literally trained to feel that the world around him was his home—*kahuraru*, the universe, meaning literally the inside land, and that his house was a small model of it. The infinite cosmos was his constant source of strength and his ultimate progenitor, and there was no reason why he should hesitate to set out alone and explore the wide world, even though years should pass before he returned. Not only was he not confined within four walls but he was not cloaked in with a permanent group of people. The special concern of his mother did not mean that he was so closely embedded with her emotionally that he was not able to move about.



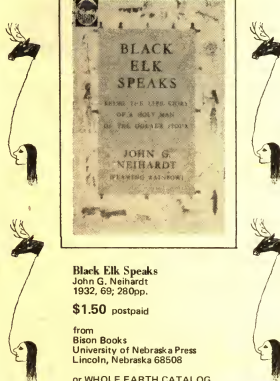
Picture 31-1. (1) A simple bow of ashwood. (2) A snow-backed bow, *akusauksauks*. Two pieces of sinew, crossed at the middle could be permanently pasted on when wet.

As they continued on the move, pressures might build up between individuals because of the closeness of the living conditions in camp and the strain of constant migration. This was particularly true between father-in-law and son-in-law. Theoretically, it was the first duty of the son-in-law to serve his wife's family, but when his father-in-law was quite old, the son-in-law often felt put upon by the arrangement. Sometimes in the camp one could hear people calling out, "Fight, fight!" and father-in-law and son-in-law would be grasping with each other in a tent. People all came together and a rough fight in the crowd would ensue. "Who's underneath?" Someone who was close to the tent would say, "Son-in-law." In general, the crowd would appear to be shouting, "That's good," the sentiment being with the underdog, the old father-in-law. Such a quarrel would be ended when a brave or other person of high social rank put a band on each of the combatants and said, "I want you to stop." Out of respect for his rank and eminence, they would separate at once and go in different directions. Should they not respond it would be a major insult and he would say a second time, "Didn't you hear me?" This would certainly and the offender would be very sensitive and to dislike violence could perform this same good office. Violence of this kind within the village or band was considered a serious social malfunction and people made every attempt to avoid it or put a stop to it.

## Black Elk Speaks

The Pueblo tribes don't go in for visionary solitary mystical whizbangs. (Of all it only then Taos is into peyote very much.) The plains tribes are something else however. Their lives turned on their visions—to mail-hound transports, dreams, name visions, sun dance ordeals, battle ecstasy, doctoring sessions . . . and later, ghost dance and peyote. This book is the power vision of one Oglala Sioux, and the extraordinary man it made. Black Elk's account, besides affording unusual insight into Sioux life and history, affords figures such as Crazy Horse, demonstrates the manner of recognizing a serious vision and being responsible for it, and the burden, joy and power of doing that.

—SB



## Black Elk Speaks

John G. Neihardt  
1932; 65; 250 pp.

\$1.50 postpaid

from:  
Bison Books  
University of Nebraska Press  
Lincoln, Nebraska 68508

or WHOLE EARTH CATALOG

Crazy Horse's father was my father's cousin, and there were no chiefs in our family before Crazy Horse; but there were holy men, and he became a chief because of the power he got in a vision when he was a boy. When I was a man, my father told me something about that vision. Of course he did not know all of it; but he said that Crazy Horse dreamed and went into the world where there is nothing but the spirits of all things. That is the real world that is behind this one, and everything we see here is something like a shadow from that world. He was on his horse in that world, and the horse and himself on it and the trees and the grass and the stones and everything were made of spirit, and nothing was hard, and everything seemed to float. His horse was standing there, and yet it danced around like a horse made only of shadow, and that is how he got his name, which does not mean his horse was crazy or wild, but that in this vision it danced around in that queer way.

It was this vision that gave him his great power, for when he went in to fight, he had only to think of that world to be in it again, so that that he could go through anything and not be hurt. Until he was murdered by the *Waiichus* at the Soldiers' Town on White River he was wounded only twice, once by accident and both times by some of his own people when he was not expecting trouble and was not thinking, never by an enemy. He was fifteen years old when he was wounded by accident; and the other time when he was a young man and another man was jealous of him because the man's wife liked Crazy Horse.

They used to say too that he carried a sacred stone with him, like one he had seen in some vision, and that when he was in danger, the stone always got very heavy and protected him somehow. That, they used to say, was the reason no horse ever rode lasted very long. I do not know about this; maybe people only thought it; but it is a fact that he never carried one horse long. The worst one that it was only the power of his great vision that made him great.

... Then I was standing on the highest mountain of them all, and round about beneath me was the whole hoop of the world. And while I stood there I saw more than I can tell and understood more than I saw; for I was seeing in a sacred manner the shapes of all things in the spirit, and the shape of all shapes as they must live together like one being. And I saw that the sacred hoop of my people was one of many hoops that made one circle, wide as daylight and as starlight, and in the center of one circle, widely flowing there to shelter all the children of one mother and one father. And I saw that it was holy.

Black Elk said the mountain he stood upon in his vision was Harney Peak, in the Black Hills. "But anywhere is the center of the world," he added.

When a vision comes from the thunder beings of the west, it comes with terror like a thunder storm; but when the storm of vision has passed, the world is grander and happier; for wherever the truth of vision comes upon the world, it is like a rain. The world, you see, is happier after the terror of the storm.

You have noticed that the truth comes into this world with two faces. One is sad with suffering, and the other laughs; but it is the same face, laughing or weeping. When people are already in despair, maybe the laughing face is better for them; and when they are too good and are too sure of being safe, maybe the weeping face is better for them to see.

I think I have told you, but if I have not, you must have understood, that a man who has a vision is not able to use the power of it until after he has performed the vision on earth for the people to use.

## Custer Died For Your Sins

Vine is the perfect dude to write of current Indian politics. Son of a missionary, enough Sioux to be a Sioux, long experience getting Indian kids into good schools, revved up by The National Indian Youth Council stand-up-and-fight meetings of the late fifties and early sixties, levered into the key position of Executive Director of the major Indian lobby The National Congress of American Indians, and after all that he's thirty-five and still funny. He has what *Alvin Josephy* warned me about, "the traditional American curd-throat zeal for politics." Add that to his humor and his thoroughness and you have an unusually clear summary of the Indian situation now. His recommended route for Indian survival is strong land-based tribal identity. Since Vine addressed his book primarily to young Indians, I can't resist a remark to young white Indian-savers: you can't help anybody by saving them; that's a self-defeat program. Relax and appreciate. Custer died for your sins. Also your virtues.

A long-haired artist famous former-dude-friend commune white person I know is busy learning from his Indian friends at the Taos Pueblo: manners.

—SB

## CUSTER DIED FOR YOUR SINS

Custer Died For Your Sins

vine Dettora, Jr.

1969, 279 pp.

\$1.25 postpaid

Avon Books  
859 Eighth Ave.  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

From 1960 to 1980, tribes were confined to reservations, as the West was in its death throes. Churches began lobbying early in the 1960's as the Indian Bureau in Washington for franchises over the respective reservations. Thus one reservation would be assigned to the Roman Catholics, one to the Lutherans, one to the Methodists, and one to the Episcopalians. Other churches were prohibited from entry on a reservation once it had been assigned to a particular church and could enter only with permission from the other church. It always bothered me that these churches who would then share pulpits and regarded each other as children of the devil, should have so cold-bloodedly divided up the tribes as if they were choosing sides for touch football.

People have found it hard to think of the Indian Bureau without conjuring up the picture of a massive bureaucracy oppressing a helpless people. Right-wing news commentators delight in picturing the Indian as a captive of the evil forces of socialism and leftist policy. Liberals view the bureaucracy as an evil denial of the inherent rights of a free man.

It would be fair to say that the Indian people are ambivalent about all this. They fully realize that with no funds for investment in social services they are dependent upon the federal government for services which the ordinary citizen provides for himself and which other poor do not receive except under demeaning circumstances. Yet they are also fully aware that the services they receive are not gratis services. Many services are set out in early treaties and statutes by which Indians bargained and received these rights to services in return for enormous land cessions.

... the bureau should not be characterized as paternalistic. It should be characterized as "fear-ridden," for the circle of fear that operates within it is much more detrimental to its efficiency than is its desire to paternalize.

Peoplehood is impossible without cultural independence, which in turn is impossible without a land base. Civil Rights as a movement for legal equality ended when the blacks dug beneath the equality fictions which white liberals had used to justify their great crusade. Black power, as a communications phenomenon, was a godsend to other groups. It clarified the intellectual concepts which had kept Indians and Mexicans confused and allowed the concept of self-determination suddenly to become valid.

I remember spending a whole afternoon talking with a number of hippies who had stowed in Denver on the way west. They were tribally oriented but refused to consider customs as anything more than regulations in disguise. Yet it was by rejecting customs that the hippies failed to tribalize and became comical shadows rather than modern incarnations of tribes.

Hippies, at least as I came to understand them, had few stable clan structures. They lived too much on the experiential plane and refused to acknowledge that there really was a world outside of their own experiences. Experience thus became the primary criteria by which the movement was understood. Social and economic stability were never allowed to take root.

Robert Thomas tells a famous story concerning the Cherokee who had a white man kill his children, steal his wife, sell his cattle, and burn his farm. The Cherokee chased the man for ten years and finally caught him. "Are you the guy who did all those things," the Cherokee asked. "Yes, the white man admitted, he was the one."

"Well, you better watch that crap," the Cherokee warned.

And that is my greatest concern for the Indian people. That we will be so damn polite that we will lose everything for fear of hurting someone's feelings if we object to the way things are going.

## Tales of the North American Indians

most anthropology always seemed a little like legalized graverobbing to me. This book does everything through a cross-reference bibliography-type distance from the content classification system, but the tales survive. It is a fine readable collection of farout stories.

—jd

Tales of the North American Indians selected and annotated by Smith Thompson 1966, 385 pp.

\$2.95 postpaid  
from:  
Indiana University Press  
Tenth and Morton Streets  
Bloomington, Indiana 47401

or WHOLE EARTH CATALOG



The beaver and the porcupine were great friends and went about everywhere together. The porcupine often visited the beaver's house, but the latter did not like to have him come because he left quilts there. One time, when the porcupine said that he wanted to go out to the beaver's house, the beaver said, "All right, I will take you out on my back." He started, but instead of going to his house he took him to a stump in the very middle of the lake. Then he said to him, "This is my house," left him there, and went ashore.

While the porcupine was upon this stump he began singing a song. Let it become frozen. Let it become frozen so that I can cross to Wolverine's place." He meant that he wanted to walk ashore on the ice. So the surface of the lake froze, and he walked home.

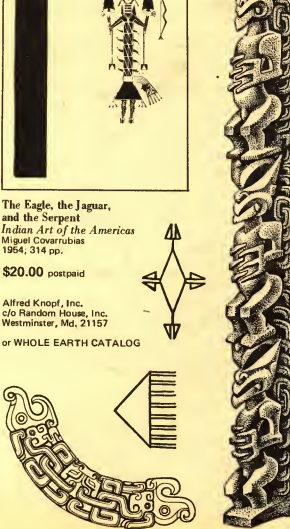
Some time after this, when the two friends were again playing together, the porcupine said, "You come now. It is my turn to carry you on my back." Then the beaver got on the porcupine's back, and the porcupine took him to the top of a very high tree, after which he came down and left him.

For a long time the beaver did not know how to get down, but finally climbed down, and they saw that this was what gets the broken appearance to tree bark.

## The Eagle, The Jaguar, and the Serpent

I've had this book out of the library for about four years now, and haven't read the text yet, got my money's worth out of the illustrations.

—jd

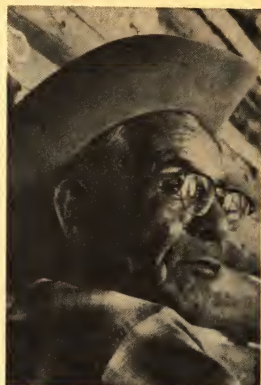


The Eagle, the Jaguar, and the Serpent  
Indian Art of the Americas  
Miguel Covarrubias  
1964, 314 pp.

\$20.00 postpaid

Alfred Knopf, Inc.  
c/o Random House, Inc.  
Westster, Md. 21157

or WHOLE EARTH CATALOG



Hola Tso

## Sacred Knowledge

Will you please reveal to me what knowledge of organization the Indians taught you. I have been wondering since the article in Rolling Stone a few months ago. Hope you will find time to answer.

Love,  
Eileen O'Leary  
Vancouver  
B.C.

Anarchistic Indians, right? So I still thought until I attended a Navaho peyote meeting. The Roadman, Hola Tso, was in charge at the center behind the altar, handled all the major ceremonial changes, was aware of everything going on, had full responsibility and authority, was strict, was humorous, said very little, let most of the administrative mechanics be handled by the other officers Fireman, Cedamian, Drummer, Peyote Woman—one hand on the helm, sharp crew.

I've been to glorious meetings, with big feeling and big learning. And to loser meetings, boring, depressing. The glorious were flexible, tight. The losers, loose, "democratic," wishful, weak. That's what I saw. The difference wasn't Indian, White; it was responsibility, or not.

—SB

## Alcheringa

If you like Rothenberg's *Technicians of The Sacred* (p. 311) you can probably use his magazine of *World's Tribal Poetries*.

—SB

Alcheringa

Jerome Rothenberg, Dennis Tedlock, eds.

\$5.50 /4 issues (2 years)

\$1.50 /issue

from:  
Alcheringa  
Stony Brook Poetics Foundation  
Box 1102  
Stony Brook, N.Y. 11790



"You know," Barry went on, "I don't guess I saw Emmitt more than once or twice a year the last five or six years he lived, but I tell you, I was always mindful of him living up there on that hill. I use to know about everybody that lived on Trace Fork. I watched an move out one by one, till they wasn't a soul living up there except Emmitt. Of course it's all ruined up in there now. But it seemed like as long as Emmitt stayed on, the place wasn't plumb dead yet. I'd be wanting to get up to see Emmitt for a long time, but I just never got around to it. Of course, if I'd of known he wasn't going to be with us right on end on, I'd have made myself get around to it. But there you are."

"It really is a shame," said Mrs. Thornton. "I mean, me and Wheeler talked about going to visit Emmitt too, but we just kept putting it off. It's funny, how you'll put off things you intend to do, and put 'em off and keep on putting 'em off. And then all of a sudden it's too late to do it even if you try. I feel bad about it, I declare I do."

"We all could have done better by Emmitt than what we did," said Barry. "We sure could have been better neighbors than what we was."

(continued)









## Paper Airplane Book

"If we knew what it was we would learn, it wouldn't be research, would it?" was the title of an ad for Scientific American's project of an international paper airplane competition. The 20 winners are photographed in full page aeronautical glory followed by a tear-out pattern for imitations. No materials are needed other than the basic one referred to in the dedication —

The authors wish to dedicate this manuscript to Capt. Fear God Backom, out of New Bedford, Massachusetts, who brought the first known pad of lined 8 x 11" paper from China on May 1, 1742. It may well be said of Capt. Backom that without him, the paper airplane as we know it would not have been possible.

and scissors and infinite doodling type patience. As a school librarian with only two copies of this wildly popular book, I was finally reduced to tearing it up page by page for an eye level wall display for group reading and a handy supply of tracing paper for pattern copiers. Our airplane climax was the North Hillsborough, California School Paper Airplane Olympics with appropriate contests and flyers, after which we were not able to cross the school campus without shuffling ankle deep in aborted and/or terminated flight materials. The school custodian was one of the few associates not turned on by this librarian's display of fancy (or reason, depending on your bias).

(Reviewed by Carol Guyton Goodell)

## THE GREAT INTERNATIONAL PAPER AIRPLANE BOOK



The Great International Paper Airplane Book  
Book  
Jerry Mander,  
George Dippel, and  
Howard Gossage  
1967, 128 pp.

\$2.95 postpaid

from:  
Simon & Schuster, Inc.  
11 West 30th Street  
New York, N.Y. 10018  
or WHOLE EARTH CATALOG

## How To Make and Fly Paper Airplanes

written by the winner  
of the Great International  
Paper Airplane Contest.

—Id

## HOW TO MAKE PAPER AIRPLANES

How to Make and Fly Paper Airplanes  
1970, 83 pp.

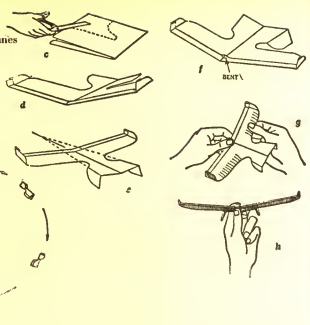
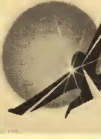
How to Make and Fly Paper Airplanes

1970, 83 pp.

\$75

from:  
Bantam Books Inc.  
666 Fifth Avenue  
New York, New York 10019

or WHOLE EARTH CATALOG



## Fishertechnik

One more item in the form of a suggestion to the Catalogue; there must be a few readers like myself who have kids (We have a six year old boy) and who travel and are often trying to answer the question of buying a worthwhile toy. Toys like art books are many and I haven't seen any in the catalogue. You ran the Tuntin book because of it's obvious up front value and I feel the same way about a toy I want to tell you about.

We've taken our son everywhere we've gone and on our last trip we obtained a Fishertechnik building set which John played with day after day without ever tiring of the toy or destroying it and it took some abuse on our recent trip to Afganistan. This toy is not advertised, hence requires turning people to us to. I think it is the best building toy on the market with many applications for kids and adults. It's expensive and a German import. The sold importer is:

Fisher of America, Inc.  
1317 Broad Street  
Clifton, New Jersey 07013  
Attn: Ted Klewerwitz

Lowell Sid Sherry

## Model Rockets



## Kites

New Golden Handbook. All the basic information. Send up two trains of kites with spotters to keep them apart; attach a man-sized harness; goodbye.

—SB

## Kites

Wyatt Brummitt  
1971, 120 pp.

\$1.25 postpaid

from:  
Golden Press  
c/o Western Publishing Co.  
1220 Mount Ave.  
Racine, Wisconsin 53404

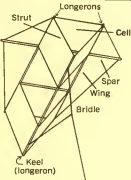
or WHOLE EARTH CATALOG

## KITES



The best known "general store" of kiting is the Go Fly a Kite Shop, 1613 Second Avenue, New York City 10028. An illustrated price list is available; much of their business is by mail. Surinder Bahadur is the proprietor.

Kyte House, Richardson, Texas 75068, carries several makes and models but specializes in kite kits with which some unusual variants can be built. Kite cost about \$3.50; kite plans about \$2. It is run by R. E. Sanford, who issues a catalog called Kyte Lines. Schubert's, 2135 Union Street, San Francisco 94123, is primarily a toy shop, but the owner is a kite enthusiast and carries a variety of ready-made models.



Flying line

Model rockets, you say, what are they... idealizations of instruments of war? Not at all. They are idealizations of one of man's primal urges, mastery of the skies.

In practice model rocketry is safe (remote control firing, parachute recovery), inexpensive (engines—25¢, vehicles—\$2.50), scientific (limitless opportunities for creative one-man research), and great fun. Practical applications include smog sampling, weather studies and aerial photography. Model rocketry supplies became available as a safe and meaningful alternative to dangerous "Bumstein Bomber" activities of amateur rocket builders impressed by the first Sputniks in the late 1950's. The National Association of Rocketry was formed to promote safe and educational model rocketry activities among manufacturers and enthusiasts.

Brochure: Free  
National Association of Rocketry  
Box 178  
McLean, Virginia 22101

The inexpensive NAR membership includes a subscription to Model Rocket Magazine, an independent and outstanding monthly mag produced by MIT students during their free time. Coverage ranges from elementary How-To articles to the unbelievably exotic.

Standard magazine format and circulation but it is managed as a sort of commons. All profit goes to an informal fund used for research and financing field trips to regional flying competitions and NASA events. Typical articles explain model rocket applications in tracking systems, telemetry, aerial photography, and activities in the Soviet Union, a country which long ago realized the educational aspects of model rocketry. Subscription available separate from NAR membership.

\$5.00 (for one year, monthly)  
Model Rocket Magazine  
Box 214  
Boston, Massachusetts 02123

There are nearly a dozen manufacturers of kits and parts to choose from, but ESTES and CENTURI are consistently the best. There are many similarities between these two, but their differences are striking. Estes is the venerable pioneer, but it stresses bold innovations such as flexible landing gear and unbelievably inexpensive aerial photography cameras (Still camera: \$4.00). Soon to come out with a motion picture camera suitable for use in flying models... less than \$20... WOW!

Centuri is noted for kits of handsomely detailed scale models and formidable power of their larger engines. Centuri, like Estes, has a well developed educational services program where free textbooks and discount prices are offered to any sort of reasonably legitimate educators such as teachers, Boy Scout leaders and Civil Air Patrolers. Both are mail order oriented, with excellent personalized service. The safe and inexpensive engines of all manufacturers are standardized and interchangeable. Estes and Centuri each send free newsletters to regular customers.

Model rocketry is a going thing, not only because it offers an opportunity for inexpensive rocket research, but because it is a fun way to participate in the Space Age.

Catalog: 25¢  
Estes Industries, Inc.  
P.O. Box 227  
Penrose, Colo. 81240

Catalog: 25¢  
Century Engineering Co.  
Box 1988  
Phoenix, Ariz. 85001

Melville G. Boyd  
Midwest City, Okla.

## Kite Tales

For people who are into kite-flying as a hobby or a sport, I would like to suggest a listing of the American Kitefliers Association. Their mailing address is P.O. Box 1511, Silver City, New Mexico, 88061. They are the only true organization of kite fliers in the world, representing 40 states and nine foreign countries. They publish a quarterly magazine, "Kite Tales" which contains many articles of interest on building and flying kites, as well as advertising for all different sorts of kites, probably the biggest selection anywhere. Membership costs \$2 per year, which includes a subscription to the magazine.

Sincerely, Pax,  
Robert Williams  
Worcester, Massachusetts



Regardless of what other equipment you take along on a kiteflying expedition, one should always have some type of cutting instrument, preferably a sharp knife. Perhaps the second most important item of supply is a roll of some type of self-adhesive tape to repair failures.



Oh, I've slipped the surly bonds of earth —

386 Kites & Paper Airplanes  
Learning

(See also p. 131)







After two years of looking at everybody's nifty books, I'd say that the two sets of books to have around your place for pick-up education of young and old are the *Golden Handbooks* (see p. 373) and these science books from *Time-Life*. They're available only by mail, and they come one every month or so. If you don't like what you got, you can send it back. We haven't sent any back.

Most popular science books are badly behind the times. This series puts special emphasis on recent developments. —SB

## LIFE Science Library

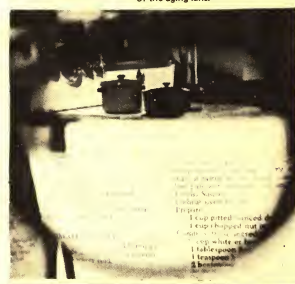
each book \$4.95  
plus shipping  
from:  
Time-Life Books  
Dept. WEC  
Time & Life Bldg.  
Chicago, Illinois 60611

## TWO LENSES IN ONE

Bifocals—introduced to America in the 18th Century by Benjamin Franklin—help older people with rigid lens structure to focus at both near and far distances. The upper half of the spectacle lens gives slight correction for distant viewing. The lower half is for close-up work; it provides the increased refraction needed to compensate for the increasing rigidity—and the inability to focus—of the aging lens.

## Light and Vision

**THE EVOLUTION OF CORN** is the modern fruitless version required 7,000 years of radical change, as indicated by these three cobs. The mid-length ear of wild maize (*teosinte*)—a Central American plant now extinct—dates from around 5,000 B.C. It has only eight rows of kernels with five to six kernels on each row. By 500 B.C., Mexicans were growing four-inch-long ears called *Mal-Tel* (learned) that had some 11 rows of small kernels per cob. Today, one of the most widely cultivated corn plants in Mexico is *Chiquito* (right), eight inches long, with 17 rows of narrow kernels.



The dangers of leaching were pointed out as recently as the 1920's, when public health officials were puzzled by the strange pattern of malnutrition in the South. Impoverished sharecroppers there ate poorly—grits, corn mush and molasses, greens, with a bit of fatback. The diet for white and Negro sharecroppers was much the same. But, oddly enough, the whites suffered more severely from deficiency diseases; the Negroes, also ill-fed, were relatively unaffected. The mystery was not solved until the scientists learned that both whites and Negroes boiled their staple foods for long periods to improve the palatability of the somewhat tasteless provisions. But then the whites threw away the cooking water; using the so-called potlikker was socially unacceptable. With the discarded liquid went the nutrients that had been leached away by long boiling. The Negroes, uninfluenced by the social stigma attached to potlikker, drank it and used it to soak corn bread, recapturing the essential vitamins and minerals.



## PARIS IN THE SPRING

## WHAT'S WRONG WITH THIS PHRASE?

At first glance, seemingly nothing. But with closer reading the repetition of the word *THE* becomes obvious. Because we generally read rapidly in word patterns rather than slowly a word at a time, it is easy for the eye to skip over the extra *THE* and register the familiar phrase "correctly."

Light and Vision

## How to Build a Working Digital Computer

Since computers are ever more centrally with us, it behooves us to allow them as few mysteries as possible. A kid who's built a computer out of paper clips has a healthy handle on his relationship with high technology.

The computer you can build from this book will operate with a program of 28-bit instruction words and has a ten-instruction repertoire. It adds, subtracts, multiplies, divides, and costs very little.

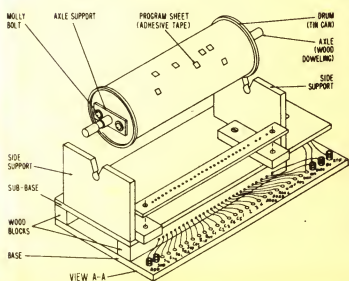
—SB

How to Build a Working  
Digital Computer  
Alcous, Phillips, and Wolk  
1967, 70, 176 pp.

\$4.45 postpaid

from:  
Hayden Book Co., Inc.  
116 West 14th Street,  
New York, New York 10011

or WHOLE EARTH CATALOG



## WFF 'N PROOF

The WFF 'N PROOF games came out of the ALL proof (Accelerated Learning of Logic) at Yale Law School. This project was established in 1960 to develop materials to teach mathematical logic to elementary school students. The authors' first principle in designing the games was that they be fun to play.

WFF 'N PROOF is a series of 21 games. The first ones can be played by children (starting around age eight), the last ones are difficult enough to interest logicians. The first game can be bought separately under the name of just "WFF." It is the best game and children always like to play it. In it you learn what a WFF (well formed formula) is, and there is no nicer way of doing that. The rest of the games teach you about constructing logical proofs. They are more tedious and a good teacher can find ways of doing this which are more fun. There's no harm in getting the whole set, however, and using it as long as it works.

[Reviewed by Jane Burton]

WFF \$1.50 postpaid  
WFF 'N PROOF \$8.00 postpaid  
Tac Tickle \$1.00 postpaid  
The REAL Numbers Game \$2.00 postpaid  
On-Sets: The Game of Set Theory \$5.00 postpaid

The Propaganda Game \$6.00 postpaid

from:  
WFF 'N PROOF  
P.O. Box 71  
New Haven, Conn. 06501

or WHOLE EARTH CATALOG



And about that time Elmer the mailman came in with the morning delivery. D.R. excused himself from the conversation and took his letters to Mrs. Godsey, behind the cage.

"He's about to miss the boat aint he Mrs. Godsey?" said Elmer as he traded mail sacks with her. "Yes sir. About to miss the last mailboat out of China."

"Oh no," said Mrs. Godsey as she held D.R.'s two letters up to the light. "These letters' going to California, Elmer. We can't lose this mail down. Going to, what's this, honey? Anaheim? I can't make that out."

"Fleish," said D.R.

"Fleish. Now that's a queer name. And what's this one?"

Elmer?

"Estelle," said D.R. "Estelle Adams."

Mrs. Godsey stamped the postmark on the letters, then set a minute, thinking. "Adams. That's not Felix Adams's girl from Leatherstock is it? That joined the WAC's here while back? Seems like they sent her to California."

"No man," said D.R. "Estelle's not from around here. She's from Michigan."

"How come you're writing to her in California then?" asked Mrs. Godsey.

D.R. grinned. "Well, I was thinking she might be in California by now."

"But you don't know for sure," said Mrs. Godsey.

"No man, I don't," said D.R.

"Sounds like this must be your sweetheart," said Mrs. Godsey.

D.R. laughed. "I guess I don't know that for sure either," he said.

"Well now, she either is or she ain't," said Mrs. Godsey. "Aint that right, Elmer? Elmer's a bachelor, but he knows more about women than anybody else around here, don't you Elmer?" Elmer took the letters from Mrs. Godsey and stuffed them into the mailbox. When he'd drawn the strings on the bag together again, he looked up and pushed his cap back off his forehead.

"It's like this," said Elmer. "She either is or she ain't unless you're on the spot, and then it all depends. Sometimes one can be your sweetheart but get on the outs with you, and then it's just all hully-awhah."

Everybody in the store laughed at Elmer then, including Mr. McClenshan who hadn't understood what was said, but who was in the habit of laughing at Elmer every time he saw him at the store.

"Elmer's got more sweethearts than any man around here," said Barry.

"But I hear there's one he likes better than any other," said Mrs. Thornton.

Standing in the door now, about to leave, Elmer said, "If you ell don't quit talking about me I wont bring you any more mail."

"You don't avar bring nothing worth reading anyhow," said Barry.

"I bring the Blaine Herald once a week," said Elmer.

"Wall you know they aint nothing worth reading in that thing," said Barry.

Mrs. Thornton said, "Elmer, if you don't bring me a letter from Cheriens pretty soon I'm going to wring both your necks."

"I'll bring you one tomorrow if I have to write it myself," said Elmer.

"It'll be looking for it," said Mrs. Thornton.

"So long," said Barry, and as Elmer went out the door, waving, Mrs. Godsey said, "We'll see you tomorrow, Elmer. You be good now."



## Build-it-yourself Science Laboratory

My youthful science investigations went about as far as the tameability of wild animals and the thermo-dynamics of breaking glass. Some kids go a lot further, and this book is for them. Stay out of the lab unless invited.

—SB  
[Suggested by Fernando L. Nevarez]

Build-it-yourself Science Laboratory  
Raymond E. Berrett  
1963; 339 pp.

\$6.95 postpaid

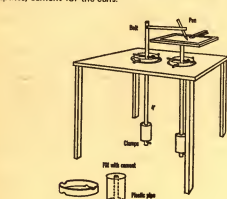
from:  
Doubleday Books  
501 Franklin Ave.  
Garden City, N.Y. 11530

or WHOLE EARTH CATALOG

HARMONOGRAPH

Purpose: Harmonic motion is a movement or motion that repeats itself. A pendulum is a good example of harmonic motion. When two forces work together, the result is a pattern of movement that combines the movements of both forces. The harmonograph records such movement in pleasing and unusual designs.

Materials: Wood for stand, piece of plywood, two wooden rods about 5 long, two metal rings, two cans, two clamps for the rods, four spikes, cement for the cans



## Transistors and Circuits

Home electronics.

Transistors and Circuits  
W. E. Pierce, and Aaron E. Klein  
1966; 1971; 156 pp.

\$4.95 postpaid

from:  
Doubleday and Co., Inc.  
501 Franklin Ave.  
Garden City, N.Y. 11530

or WHOLE EARTH CATALOG  
(probably cheaper from Blackwell's, p. 2)

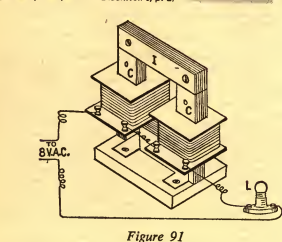


Figure 91

## LIGHTNING CONDUCTORS

A lightning discharge is an electric spark between two oppositely charged clouds, or between a charged cloud and the earth. The discharge may pass through a building with disastrous results. To prevent this, a conductor such as a copper strip is well grounded at one end and near well and erected as high above the building as possible. At the top, a number of sharp metal points are fixed to the conductor. When a charged thunder cloud comes over the house, there is a good chance that point action will neutralize the charge on the cloud. If a flash should occur, the straight conductor offers an easy and safe path for the electricity to the ground.

In a number of electrical machines, as described later, charges are collected by the action of points. On the other hand, charges can be lost by point action. Charge the electrostatic in Figure 10, and remove the balloon. Place a grounded conductor within 1/8 inch of the points. Unless you are well insulated your hand will do the conductor. The action is now reversed, and the electrostatic loses its charge, which is grounded.

## Crystals and Crystal Growing

Grow your own.

Read J. G. Ballard's The Crystal World.

Crystals and Crystal Growing  
Alvin Holden, Phyllis Singer  
1960; 320 pp.

\$2.50 postpaid

from:  
Doubleday and Co., Inc.  
501 Franklin Ave.  
Garden City, N.Y. 11530  
or WHOLE EARTH CATALOG

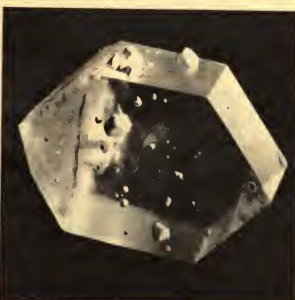


Plate 11. An ethylene diamine tartrate crystal with unexpected crystals growing on its surfaces. Later they were identified as crystals of the monohydrate.

One of the touchstones to the true solid—a crystalline solid, in contrast to a merely "rigid" glass—is its sharp melting temperature. When you heat the crystal slowly, it remains rigid until it reaches its melting point. Then, if you keep it at that temperature, it will melt completely to a liquid. The temperature need not increase as the crystal melts; the melting point is a critical temperature for it, and there its orderliness suddenly collapses into disorder.

## Permanent Bubbles

I'd like to recommend for review a publication of the Franklin Institute titled "True Plastic Bubbles and How to Blow Them." It's done by the same people who caused such a stir about a year ago with their giant long-lasting soap bubbles. The resulting excitement inspired them to greater heights. This report tells how to test, measure, and make permanent bubbles. The bubbles are tough, blowproof, and being made of plastic film, have an indefinite life span. The report gives brochures and sources for materials. Ask for "Plastic Bubbles Report" (No. 1) available from the Franklin Institute, 21st and the Parkway, Philadelphia, Pa. — \$1.00

John Previs

Urbana, Ill.

## Home Physics

Einstein once said that physics first knew sin in World War II. Chemists had known sin in the First World War. By this he meant that the explosives and poison gases used in WW I were the work of chemists. The sin of the physicists was the atom bomb. There was time before the physicists sinned. This was also a time before large grants and appropriations existed. Then physicists were cheap. They built their research equipment from whatever was cheaply available. There is a how to do it book from that period. The title is Procedures in Experimental Physics. The author is John Strong of Cal Tech. The illustrations are by Roger Heyward who does those fine drawings in the Amateur Scientist in "Scientific American". Published by Prentice-Hall the book costs about \$8.00. The same book is published in England under the title Modern Physical Laboratory Practice.

The first chapter in the book concerns working with glass. All the basics are covered. Several chapters have to do with making and testing mirrors, lenses, and telescopes. Others deal with heat and its measurement. Filters for light and special light sources are covered in still other chapters. If you want to go more deeply into photography than most amateur photographers do, there is a chapter for you. There are chapters on melting iron, silver, or gold and making castings with them. All these things are done with simple hand tools for the most part. In short the procedures for doing most of the things necessary to make something useful are explained in this book. In addition this book is one step above most of your self-type books, because all the procedures have references to the technical journals. With these you can go still more deeply into those items that interest you. This is an essential reference book for everyone who uses tools to make things.

Sincerely,

Daniel P. Norman  
Chicago, Illinois

## Test Tubes and Beakers

Home Chemistry. A little deeper than 700 Science Experiments (p. 388).

Test Tubes and Beakers  
E. H. Coulson, A. E. J. Trinder, Aaron E. Klein  
1963, 1971; 134 pp.

\$4.95 postpaid

from:  
Doubleday and Co., Inc.  
501 Franklin Ave.  
Garden City, N.Y. 11530

or WHOLE EARTH CATALOG  
(probably cheaper from Blackwell's, p. 2)

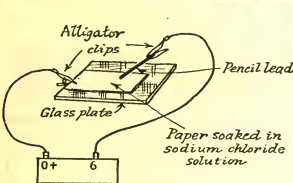


Figure 66

## Electric Writing

Dissolve 1/8 teaspoon of sodium chloride in 2 milliliters of water. Divide the solution into two parts.

1. To one part add 3 drops of phenolphthalein solution. Using a bulb pipette, drop this mixture onto a 2 inch square of white blotting paper (or filter paper) until it is just wetted. Put the wet paper on a small piece of glass, and attach the alligator clip on one of your electrolysis leads to both paper and glass (Figure 66). Connect the plus end of this lead to the + pole of the battery. Fix a piece of the pencil lead into the alligator clip of the other lead and connect this to the 6-volt pole of the battery. Hold the pencil lead in your fingers and write lightly on the wet paper. The writing will appear red because of the formation of alkali at the cathode. Do not go on with this experiment too long; chlorine gas is evolved at the anode which, besides being poisonous and unpleasant, will corrode the alligator clip attached to the edge of the glass plate.

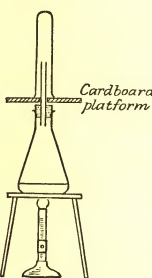


Figure 46

## THE PREPARATION OF AMMONIA

Place 1/2 inch of ammonium chloride and 1/2 inch of slaked lime in a small test tube. Mix thoroughly. Gently warm in a Bunsen flame. Caution: smell the gas evolved by waving the gas toward you. Hold a damp red litmus paper near the mouth of the tube and note any changes. The gas is ammonia. Is the gas acidic or alkaline?

To make a larger quantity of the gas, set up as shown in the diagram (Figure 46). If a piece of cardboard is fitted over the delivery tube, it will help prevent too much of this gas escaping.

Put 1 inch of strong ammonia solution or household ammonia in the flask and heat gently. As the gas is lighter than air, it can be collected by upward delivery. Collect a jar and several tubes of the gas by holding the containers over the delivery tube.

1. Observe the color and smell of the gas. The odor is hard to forget.
2. Invert one of the tubes under water and note what happens inside the tube. What does this indicate?
3. Invert the jar of ammonia and put a lighted splint into the jar (Figure 47). What is the color of the flame just above the splint before it goes out?

Consistently the best science writing and illustrating appears in *Scientific American*. For 25¢ you can get a full color copy of any article. The catalog of offprints is well organized and gives a good capsule description of each article (some 700 to choose from).

-SB

[Suggested by Jane Burton]

## Catalog

free from:  
W. H. Freeman & Company  
680 Market Street  
San Francisco, CA 94104

## ANTHROPOLOGY

140. John Napier THE EVOLUTION OF THE HAND
167. Bernard Greenberg FLIES AND DISEASE
162. H. Bentley Glass THE GENETICS OF THE DUNGEON
1070. John Napier THE ANTIQUITY OF HUMAN WALKING
1091. J. M. Tanner EARLIER MATURATION IN MAN
1151. Johannes Iversen FOREST CLEARANCE IN THE STONE AGE
467. Edward L. Washburn CHIMPANZES IN THE WILD
462. Marshall D. Sahlins THE ORIGIN OF SOCIETY
463. Charles F. Hockett THE ORIGIN OF SPEECH
464. William W. Howells THE DISTRIBUTION OF MAN
465. Robert J. Bradwood THE AGRICULTURAL REVOLUTION
466. Robert M. Adams THE ORIGIN OF CITIES
467. Edward L. Washburn THE SCIENTIFIC REVOLUTION
468. Edward S. Dineen, Jr. THE HUMAN POPULATION
469. Theodor Doherty THE PRESENT EVOLUTION OF MAN
613. Jean de Heulst INSHANG
614. S. L. Washburn & Irene DeVore THE SOCIAL LIFE OF BARBONS
615. Colin M. Turnbull THE LESSON OF THE CHIMPANZEE
616. Julian Huxley \* WORLD POPULATION
419. William L. Langer THE BLACK DEATH
420. James Melhuish A NEGOTIABLE CITY IN TURKEY
421. Elva L. Simon THE EARLY RELATIVES OF MAN
422. Richard S. MacNish THE ORIGINS OF NEW WORLD CIVILIZATION
423. Richard J. Andrew THE ORIGINS OF FACIAL EXPRESSIONS
424. D. J. Mahoney THE PREHISTORY OF THE AUSTRALIAN ABORIGINE
425. William W. Howells HOMO ERECTUS
426. Wilson M. Krogan THE SCARS OF HUMAN EVOLUTION
427. Elva L. Simon THE EARLIEST APES
428. Annette de Waele-Medford HOMO MONSTROSUS
429. Roda & Neville Dunning SUBSISTENCE HUNTING IN UGANDA
430. S. B. Biedel & Lewis B. Biedel STONE TOOLS AND HUMAN BEHAVIOR
431. Edward T. Hall, Jr. THE ANTHROPOLOGY OF MANNERS

This book is an attempt to collect in one place and to explain as simply as possible a number of general principles, techniques, and guides for procedure which successful investigators in various fields of science have found to be useful. The emphasis is entirely on the practical rather than the philosophical or psychological aspects.

There is a story of an industrialist who was unable to duplicate in a branch factory the manufacture of a chemical in a desirable crystal form. On further investigation of the process in the main plant, he found it in charge of an elderly employee who had always operated however, revealed that at one stage he always injected tobacco juice into the vat. This was the missing step, presumably because of surface active ingredients which influenced the growth habits of the crystals.

The overconservative scientist will pass by the new phenomena; the overhasty scientist will endow commonplace events with theoretical significance. Herein lies one good reason for understanding an apparatus and its quirks thoroughly. The momentary signal on the cathode-ray screen may be worth a Nobel prize; but it may also be the thermostat turning on the room heat.

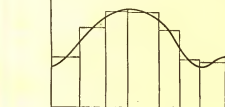


Fig. 12.3 A graphical method of determining the area under a curve. The horizontal lines are drawn so that the areas omitted and those wrongly included in each rectangle balance, as judged by eye.

## Libraries

One of the things that struck me when I first encountered *Library* was that many of the books you have suggested others have suggested are in the collection of even the tiny branch that I work at. The point being that Americans don't use or appreciate the libraries that their taxes support. A good strong pull for people to use the library is to find material (save buying a book sight unseen and being dissatisfied) and reference to further material and places to look for it would be an aid to those needing information. Given the state of the book world, the book world is an opportunity to stroll down the block to the local library however most people still have contact once and a while with some sort of town. Now many states have a complete regional library system that allows one to borrow books from anywhere in the state. This process is only as slow as the mail and the librarian's willingness to help. I know the average person's idea of librarians is of a crotchety old maid etc. and this I would have to agree with. But things are moving pretty fast back there in the stacks (how many of us were convinced there), there are hundreds of younger hip librarians and library students invading these towers of learning. One thing they've found is the older librarians are bitchy because they are frustrated radicals from another era. The resistance to suggestion and criticism from the youth in library circles has not only been low, but the most flaming radical has been welcomed as an ally by older librarians. The concept of librarianship as custodians of books is out the window. The job is now getting information and IDEAS to the people. The smaller the branch the more the librarian is eager to help. One's all alone and has few colleagues to help insulate him from the outside; two younger people don't enjoy the task well that has in the past been the librarian's excuse for lack of time to service the public. It's a good feeling when you help a person take a step closer to knowing himself and his world and librarians aren't insensitive to this. We have all the modern technology at our finger tips though sometimes we have to be prodded to use it. Like, why buy BOOKS IN PRINT when your library has it (it isn't completely; ask anyone in the publishing industry). Virtually all libraries are your entrance to the Library of Congress.

Warren L. King  
Free Library of Philadelphia  
Philadelphia, PA

If you're making a library, you might be interested in library materials, on p. 364.

-SB

## An Introduction to Scientific Research

A practical guide for the scientific experimenter, covering experimental planning, design of apparatus, and analysis and reporting of results. Basic general information applicable to many fields. Extensive lists of references for further information. The book is clearly written and surprisingly enjoyable reading.

[Reviewed by Larry McCombs]

An Introduction to Scientific Research  
E. Bright Wilson, Jr.  
1952; 373 pp.

\$2.95 postpaid

E. Bright Wilson, Jr.

from:  
McGraw-Hill Book Company  
Princeton Road  
Hightstown, N.J. 08520  
Manchester Road  
Manchester, Missouri 63062  
8171 Redwood Highway  
Novato, California 94947

or WHOLE EARTH CATALOG

## A Concise Guide to Library Research

In my hairiest dope-floped days, whenever I drove past a library I'd experience waves of gratitude to those inside who were doing what I knew I could not: opening the library on time, keeping track of the books, patiently explaining again how to use the card catalog, daily dispensing invaluable free information, all without fanfare. This is here a book of what's in a library and how to get at it.

-SB [Suggested by Craig Schensted]

## The Concise Guide to Library Research

Grant W. Morse  
1966; 167; 214 pp.

\$7.50 postpaid

from:  
Washington Square Press, Inc.  
630 Fifth Avenue  
New York, N.Y. 10020

or WHOLE EARTH CATALOG

## 8238 General works and histories of science

*A Guide to the History of Science*, by G. Sarton, 1952, Chronica Botanica Co., Inc. Includes a classified bibliography of the subject.  
*A History of Technology*, 5 vols., 1954-1958, Oxford. Scholarly and readable account of the development of technology from earliest times; chron. specially arranged.  
*Introduction to the History of Science*, by G. Sarton, 3 vols., 1927-1948, Williams & Wilkins. From Homer to the fourteenth century, including good biographies and bibliographies.  
*McGraw-Hill Encyclopedia of Science and Technology*, 15 vols., 2nd ed. 1965, and yearbooks, 1961, McGraw-Hill. Very comprehensive. One should use the index volume.  
*Smithsonian Institution*, 1847- (annual). U.S. Government Printing Office. Very useful and authoritative.  
*Van Nostrand's Scientific Encyclopedia*, 3rd ed., 1958, Van Nostrand.



CREDIT

After Mrs. Godsey had sorted the mail and handed it out and chatted with the people a while, she told D.R. to come with her to the kitchen and she would tell him Barry's article in the paper. D.R. followed and when she'd found the paper for him she asked if he wouldn't like to sit down at the table and have a cup of coffee or something while he read. D.R. said he'd like that fine, and before long he had finished reading the article and Mrs. Godsey had joined him at the table with an R.C. Cole of her own.

"That's a nice thing Barry wrote," said D.R. "Barry's wrote books and everything."

"Has he really?"  
"I don't think any of them's been printed. But he's writing one now that he says is sure to be printed, because he's made arrangements with the newspaper to turn to have it done."

"That's very far out," said D.R.

"It's what, honey?"

"That's unusual, I'm impressed."

"Lord, honey, that Barry's a genius," said Mrs. Godsey. "He used to be a house painter till he fell and paralyzed himself. That's what he took up writing. He's a pure genius at it, everybody thinks so."

"Leonard told me you quizzed him about getting credit here at the store," she said.

"Yes man, I wanted to ask you about it."

"Nothing to ask," said Mrs. Godsey. "Emmet had credit with me for years. He never missed paying a one of his bills, and I know you wouldn't either. You're welcome to anything in my store that you want."

"Now I appreciate that, Mrs. Godsey," said D.R. "And I appreciate you letting me park my bus out back too."

"Why, that ain't nothing," said Mrs. Godsey. "I like to look at it setting out there."

"You and Leonard have been a big help to me," said D.R. "I feel like I'm in debt to you both."

"We're glad to help you, honey," said Mrs. Godsey. "We're glad you're going to be with us a while. Leonard is, especially."

"How is Leonard?" said D.R. "I haven't seen him in a day or two."

"Well," said Mrs. Godsey. "I think the old grand jury business has thrown him behind in his work pretty bad. He's been to town over this week, and has to do it again next week too."

"I hope he comes up to see me when he gets a chance," said D.R. "There's some things I need to ask his advice on."

"You need to worry about Leonard coming up," said Mrs. Godsey. "Use to, they wasn't anything like better than to take off up that creek and hang around with Emmet half the day. He'd be up, you need to worry."

D.R. got up to go then. Mrs. Godsey followed him into the store to help him make out a few groceries. He saw her in the account book. D.R. bought canned things mostly, corned beef hash, peas, beans, turnip greens, a bag of cookies and a loaf of bread and some milk. Mrs. Godsey put it in a bag for him, and when they had bid each other good day D.R. set out walking back up Trace Fork again.

A completely free rigid body has six degrees of freedom: displacement in three perpendicular directions and rotation about three perpendicular axes. The ball rest make two contacts each with V grooves.

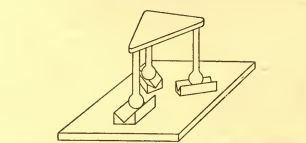


FIG. 5.13. Kinematic mounting for removable part which must be precisely located. Three ball rest make two contacts each with V grooves.

axes. The stool on the flat floor had only three degrees of freedom because its motion was restricted by three property placed constraints, the three contacts of its ball feet with the floor. The stool (or platform) of Fig. 5.13 has three degrees of freedom because its supports make six aulitube contacts, two for each ball foot. In general, a contact (or constraint) is needed for each degree of freedom which is to be eliminated. More may be used, as with the four-legged table, but then sag (internal strain) or rocking will occur unless the workmanship is very precise.









## Planet for Teachers

This is a super how-to-do-it book — Planet's thinking made concrete and applicable to the teaching of children. The theory is rich, and clearly presented, and involves mainly a concept of intelligence far more integrated, exciting, and beautiful than what we've used to. About half the book is a presentation of scores of exercises, games, and ideas for stimulating the development of real intelligence in children. Far appears to have a soft heart and doesn't get strict about how schools are fucking it up now; he just says how education could be done a lot better. I bet he's right.

(Reviewed by Diana Shugart  
Suggested by Martha LaVoie)

## Planet for Teachers

Hart G. Furth  
1970; 163 pp.

\$3.50

from:  
Prenice-Hall, Inc.  
Englewood Cliffs, N.J. 07632

or WHOLE EARTH CATALOG

Planet  
for  
teachers

A school that in the earliest grades focuses primarily on reading cannot also focus on thinking. It must choose to foster one or the other. Historically, it has chosen reading. Undoubtedly, it once could be tacitly assumed that a child's thinking had developed adequately before he entered school and continued to do so outside of school. These assumptions were perhaps not altogether illogical. In the past we have had a schoolmaster and a schoolmaster and only gradually broadened its base to include a schoolmaster and schoolmaster citizenship within a relative stable social and physical environment that was generally conducive to the development of intellectual growth. But today these assumptions are largely irrelevant for a large segment of our population.

... ask a seven-year-old child to draw you a bottle half-filled with water. When he has done this, draw the bottle—without water—in a tilted position and ask him to add the water level. Or take a match, put it half over the edge of a table, and slightly tip the overhanging part. Let a nine-year-old child observe what happens. Give him a paper on which is drawn the table and the overhanging match with the head of the match marked in solid black. Tell him to draw the successive positions of the match as it flips over and finally falls on the floor. Look at the child's drawings of the water level or of the positions which a falling match is supposed to take. I do not see how any person can observe these kinds of behavior samples and still maintain that knowing is a passive copy of "objective" facts.

We know that educators in a long tradition have put primary stress on such factors as personal acceptance, and I would be the last to belittle them. However, I venture to suggest that sensitivity to the "hidden" environment is not enough for a successful school. "Love is not enough" for the hungry child; he needs wholesome food on the table. Educational theories have been on a perilous swing from extreme external stress and discipline and learning to another that focused on emotional and social adjustment. I suggest that the latter is not enough either. A viable theory of the development of knowing will also be a viable theory of emotional and social development. A school system whose goal is geared toward healthy intellectual growth but be conducive to healthy emotional and social growth. For this reason alone, my professional advice on problems of educational adjustment or motivation would be first to check the objective program that is offered to the child. If this program is psychologically or socially unsuitable to the child's developing intelligence, we should be slow in looking for secondary, indirect causes.

These few observations merely sketch ideas on the west topic of social thinking. All I want to show you is the close organic connection between intelligence and social reality. If the school is to be for real, intellectual food must be for real, too. . . .

## How Children Learn

This rambling series of innocent everyday happenings to a boy of pre-schoolers is described, digested, and given educational depth by an extremely observant and articulate educator, Mr. Holt. The great strength of his book is its readability. His use of preschool learning situations is ingenious, since it is a common reference point to all teachers and parents. Anyone who doesn't see toddlers in a different light after reading this book probably ought to write a book himself.

[Reviewed by Carol Guyton Goodell]

## How Children Learn

John Holt  
1967; 70, 156 pp.

\$9.95 postpaid

from:  
Dell Publishing Company  
750 Third Avenue  
New York, New York 10017

or WHOLE EARTH CATALOG

HOW  
CHILDREN  
LEARN

394 Teaching  
Learning

## Teaching As a Subversive Activity

You may have noticed that schools are society's goat just now, and the blame machine revs on and on. The authors of this handy criss-cross table take a nice clean no-blame revolutionary approach to things: what works this minute and doesn't work this minute. In their experience (high-school instruction in authorial subject matter doesn't work very well. What does work is an experience-based inquiry approach to learning to learn and learning to selectively un-learn: i.e. basic survival strategy in an environment of change. What's nice is they aren't just threatening; they have gathered and published a strong collection of technique. —SB

## Teaching as a Subversive Activity

Neil Postman and Charles Weingartner  
1969; 219 pp.

\$2.25 postpaid

from:  
Della Books  
750 Third Avenue  
New York, N.Y. 10017

or WHOLE EARTH CATALOG

## Teaching as a Subversive Activity

A subversive approach to teaching, this book is a collection of proposals for how education can be made to work in today's world.  
NEIL POSTMAN & CHARLES WEINGARTNER

The new education, in sum, is new because it consists of having students use the concepts most appropriate to the world in which we all must live. All of these concepts constitute the dynamics of the questioning-questioning, meaning-making process that can be called "learning how to learn." This comprises a posture of stability from which to deal fruitfully with change. The purpose is to help all student develop built-in, shockproof crap detectors as basic equipment in their survival kits.

His teacher rarely tells students what he thinks they ought to know. His basic mode of discourse with students is questioning.

Generally, he does not accept a single statement as an answer to a question.

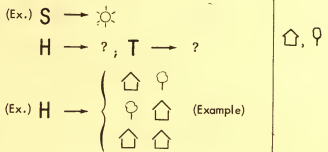
He encourages student-student interaction as opposed to student-teacher interaction. And generally he avoids acting as a mediator or judge of the quality of ideas expressed.

He rarely summarizes the positions taken by students on the lessons that occur.

His lessons develop from the response of students and not from a previously determined "logical" structure.

Generally, each of his lessons poses a problem for students. He measures his success in terms of behavioral changes in students.

## PART I The basic elements



Why does a baby begin to make sounds in the first place? Is it instinctive, like crying? It seems not to be. The baby is raised apart from other dogs who know how to bark when he gets old enough. But the few children we know of who grew up without human contact, grew up almost wholly mute. Babies in understaffed founding hospitals, who see very little of older people, are said, except for crying, to be almost silent. Apparently it is in hearing people speak around them that babies get the idea of "speaking." When they make their first sounds, are they imitating sounds they hear around them? Or are they inventing, so to speak, from scratch? Perhaps at first they mostly invent, and imitate more later.

We must recognize that there are some teachers who like being "leader-draggers." They like to feel that they are at every moment in control, not only of the child's body, but also of his mind. They like to feel themselves the source and the sole source of all knowledge, wisdom, and learning in the classroom. Some such teachers are moved by a love of power, of which the classroom gives them plenty; others, by a deep and sometimes desperate need to feel useful, necessary, and even indispensable to their students. Both kinds are strongly threatened by any suggestion that children can be taught on their own. Many other teachers would like to give their students more independence and self-direction, but are held back by a fear of the standardized tests by which their pupils, and they themselves, will be judged. In any school whose main business is preparing children to get high scores on achievement tests, regent's exams, merit scholarship exams, college boards, the like, we are not likely to see much open-ended, independent student work. It must be said in fairness, too, that so far not many of the curriculum reformers and educational reformers have shown much interest in it either. They tend to be so sure that the path they have marked out for their students is the best of all possible paths, that their main concern is how to lead or drag them down it as fast as possible.

What we confront, at this juncture, is a most difficult problem in education: helping students to unlearn much of what they "know." Joe Billings said it once a century ago: "The trouble ain't that people are ignorant; it's that they 'know' so much that ain't so." What are some of the things these students know that "ain't so?" Well, for example, they "know" that 1) the more "content" a person "knows," the better teacher he is; 2) that "content" is best "imparted" by a teacher; 3) that "content" is best kept "pure" by a departmentalizing instructor; 4) that "content" or "subject matter" has a "logical structure" or "logical sequence" that dictates how the "content" should be "imparted"; 5) that bigger schools are better than smaller schools; 6) that smaller classes are better than bigger classes; 7) that "homogeneous grouping" (with students "grouped" on the basis of some real or fancied similarity) makes the learning of subjects more efficient; 8) that classes must be held for "periods" of about an hour in length, five days a week, for about 15 weeks in order for a "course" in a "subject" to happen.

It comes as a shock to the students that there is no evidence to support any of these contentions. On the contrary, there is massive evidence to confute them. It takes some doing, however, to get students to recognize the fact that most of their deeply internalized assumptions about "education" are based on misinformation rather than information.

The instructor brought to class a black attack case. He told the students that inside the case there was a small container which was capable of producing the answer to any question anyone asked. "What questions," he asked, "do you want it to answer?"

## Teacher

Teacher is as unphony, warm, and appealing as the grubby, tear-streaked face of a child; it is also an important technical notebook for educators. Miss Ashton-Warner's organic approach to reading and writing is a detailed enough model to be explored further by teachers anywhere. It is of special value to teachers working with primary children. Students with a cultural or language barrier, and adult illiterates.

(Suggested and reviewed by  
Carol Guyton Goodell)

Teacher  
Gylvia Ashton-Warner  
1963; 224 pp.

\$1.25 postpaid

from:  
Bantam Books, Inc.  
666 Fifth Avenue  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

Noise, noise, noise, yes. But if you don't like noise, don't be a teacher.

But there are two kinds of order, and which is the one we wish for? Is it the conscious order of "discipline" or "disciplinability"? Or is it the unconscious order that looks like chaos on the surface. There is a separate world on each side of this question mark.

Organic reading is not new. The Egyptian hieroglyphics were one-word sentences. Helen Keller's first word, "water," was a one-word word. Tolstoy found his way to it in his present school, while, out in the field of UNESCO today, it is used automatically as the only reasonable way of introducing reading to primitive people. In a famine area the teachers' word limit of beginning with any words other than "crop," "soil," "hunger," "manure," and the like.

Backward readers have a private Key Vocabulary which once found launches them into reading.

The power content of a word can be determined better from a backward reader than from an average reader.

Explanations. We teachers—perhaps all human beings—are in the grip of an astonishing delusion. We think that we can take a picture, a structure, a working model of something, constructed in our minds out of long experience and familiarity, and by turning that model into a string of words, transplant it whole into the mind of someone else. Perhaps once in a thousand times, when the explanation is extraordinarily good, and the listener extraordinarily experienced and skillful at turning word strings into non-verbal reality, and when explainer and listener share in common the same set of experiences being talked about, the process may work, and some real meaning may be communicated. Most of the time, explaining does not increase understanding, and we are never lessen it.

It is a remarkable memory. There is so much to talking that we forget that it takes a very subtle and complicated coordination of lips, tongue, teeth, palate, jaws, cheeks, voice, and breath. Simply as a muscular skill it is by far the most complicated and difficult that most of us ever learn. At least as difficult as the skill required to master a serious musical instrument. We realize how difficult it is only when we first try to make the sounds of a language that we have never heard before. Surely we have heard the words and tongues won't do what we want. Yet every child learns to make the sounds of his own language. And every adult learns to make the sounds of his own language is spoken, he makes the sounds of them all. How does he do it? His coordination is poor to start with; how does he manage to do what many adults find so difficult?

The answer seems to be by patient and persistent experiment; by trying many thousands of times to make sounds, syllables, and words; by comparing his own sounds to the sounds made by people around him; and by gradually bringing his own sounds closer to the others, above all, by being willing to do things wrong even while trying his best to do them right.

## How to Live with your Special Child

No sweet romance here. Written mainly for teachers & mainly about children suffering from various forms of weirdness, it speaks to us all. Peculiar & powerful. Refreshingly skipping the theory in this book, he tells you what to do to make kids act better. Simple. Far out. Offensive. I ain't sure why, but I do think everyone should read it, in fact I downright ache for revolution in our schools, he makes it seem so possible, and because

I remember all those thousands of hours that I spent in grade school waiting the clock, waiting for recess or lunch or to go home.

Waiting for anything but school.

My teachers could easily have ridden with Jesse James for all the time they stole from me.

Richard Brautigan

Rommel Drives on Deep Into Egypt

[Reviewed by Diana Shugart.

Suggested by George von Hilsheimer]

## How to Live with your Special Child

George von Hilsheimer  
1970, 272 pp.

\$7.50 postpaid

from:

Acropolis Books

Colostone Building

2400 14th St. N.W.

Washington, D.C. 20009

or WHOLE EARTH CATALOG

## Humanitas Curriculum

School stuff from George von Hilsheimer's school. Modern Reading is sure-earn primer or money back — \$250. How Many? Math primer, \$7.80. First Abacus (\$1.25, and abacus \$10). And a remarkable line of pamphlets on such subjects as "Eliminating The Smoking Habit," "The Self-Regulating Child," "How to Run an Effective Conference," etc.

Also very rare out electronic gear: motion sensor (\$60), galvanic skin response meter (\$50), random light device (\$60), radio surveillance system (\$795), signal delay device (\$60), audible wave sensor (\$250), etc.

—58

from:  
Humanitas Curriculum  
A Division of Green Valley School, Inc.  
P.O. Box 100  
Orange City, Florida 32763



HUMANITAS SYSTEMS

## The Lives of Children

For some months, when speaking to teachers or to anyone else concerned with education, I have said that while there were many recently published books on education (my own among them) that I thought they should read, if they felt they had time for only one it should be *The Lives of Children*. It is by far the most perceptive, moving, and important book on education that I have ever read, or indeed ever expect to. For while I hope that in years to come we may learn much about human growth and development that we do not now know, I doubt that any one book will advance our understanding as much as this one.

It describes the lives of twenty-three children in the small private school in New York in which Dennison taught, and which has since been disbanded. They were black, white, and Puerto Rican in equal proportions. All were poor, half were on welfare, and about half "had come to me from the public schools with severe learning and behavior problems." ... This school, spending no more money per pupil than the city's public schools, did not fail. The children got well, grew, learned.

[Suggested and reviewed by John Holt. This review is reprinted with John Holt's request, from his review in Oct 9 N. Y. Review of Books.]

The Lives of Children  
by George von Hilsheimer  
1995: 308 pp.

\$1.95 postpaid

from:

Random House, Inc.

Westminster, Md. 21157

or WHOLE EARTH CATALOG

the  
lives of  
children

George von Hilsheimer

There is very good evidence that reducing the pressures on children and adolescent offenders reduces the incidence of their failures. For example, kids who drop out of school are arrested more often while they are in school. Dropouts do not commit more crimes than kids who remain in school. There are more juvenile crimes committed on school nights than on weekdays. The evidence indicates that the successful middle class child who also commits crimes carries out more good destructive and serious offenses than dropouts and lower class offenders.

An ideal elementary classroom has at least two teachers, and often involves as many as ten at one time (by teachers of course I mean university, aides and "para" teachers—all used to advance the transactions of learning and not just for janitorial, nursing and secretarial tasks). The number of students can be thirty or thirty or so. The room should be large and ideally has an easily accessible half-second story for reading and solitary quiet study or withdrawal for sleep or stoic. I'd like to see a "level" do nothing but be really useful in the class. The main room is organized with formal focus—messy corners, neat book corners, production corners and display corners. A separated or semi-separated area for noisy, messy corners, neat book corners, production corners and display corners. A separated or semi-separated area for noisy, messy, destructive and constructive shop work, biology or what is also ideal.

We have been impressed by the almost total inability of troubling adolescents to express or accept positive emotions. We have been amazed to see how seldom such children touch themselves or others, how little physical flexibility, even the best of them have, or how limited is their ability at nonverbal kinetic communication, how poor their mirror ability, and how congested their emotions. We are often sent children with histories indicating many rage experiences. We never see this behavior more than once or twice at our centers (probably because we simply restrain and isolate it in a very blunt and matter of fact way) and the few initiating times we do see it, it appears to us much more as display and histrionics than emotional expression.

We believe that touching is so important that we actually run a "love-up" rota of staff in our elementary residential programs. Even the most wooden of members of staff are required to touch. Each child is tickled, rubbed, fondled, patted and kissed good night with special words of affection and joy. I am always impressed by the willingness of otherwise tough and defiant teenagers to accept this "baby" treatment. Our experience is sufficiently convincing that we persist in touching these teenagers who strongly reject touching. The weaker staff is not encouraged to take on these kids but strong staff members will take and ridicule the aloofness and pursue and persist in touching.

The important principle is to bring new experiences, or present old experiences from a new angle. Don't wall them in with words by talking about the experience, analyzing, or introducing. Encourage the children to talk, talk, describe, describe, write, write, write after the experience. Don't grade the productions. What you are trying to teach is responsiveness, transaction with the environment, emotional analysis, reportage. Accuracy, style and grammar will come. Very quickly too.

Difficult children can be induced to enjoy basic English by giving them something pompously morose to translate, or first show them a translation of some pompous moralizing, then give them another to have a go at. Translating the ideas of politicians and educational philosophers is always great fun.

Conditioned Acceleration of Responses by Relief of Aversion (CARRA). We use CARRA with a simple electric stimulator. We tell the pupil that we are going to turn on a mild tingling, and then increase it. We tell the pupil to turn off when the pupil makes a new response to the category we are asking for. For example: "I want you to tell me something you might say to your mother when you wake up in the morning. Each time tell me something different."

When we get a response that is not a repetition we immediately turn the stimulator off. We tell the pupil to turn the stimulator off but no one seems to mind very much and it works a great deal more quickly. For many kids, switching on a red light seems to work well (instead of the stimulator). We tell the pupil to turn the stimulator off, and then the kid makes a mistake the machine will give him a time out. For others, simply driving an answer with verbal encouragement and direction will work. The advantage of electric stimulation is that it is simple, matter of fact, unavoidable, and does not require verbal skill on the part of the teacher or aide. Also we seem to build up a tolerance for electric stimulation which in general seems to correlate quite well with general stability in the nervous system. In addition, the conditioning model is more precise and we seem to get a split-over of conditioning for anxiety relief and a sense of being in control of the anxiety-producing stimulus.

The routine goes only about five minutes and any category is stopped soon as it becomes a rote response. The machine does a lot of something new. We are not trying to punish the child or test him.

Charles Stack has been bringing Puerto Rican janitors (preferably with little or no English) bring teaching machines into cells with young criminals. The machine gets the kid to make a mistake, then it is supposed to teach the kids. He also gets it across that since it is the machine's job to teach, if the kid makes a mistake the machine will give him a time out. The machine gives the kid a time out.

Nearly everyone rubs their eyes at this point. The machine gives the student a dime if the student makes a mistake because the machine has not done its job and taught him anything. The machine does not make a mistake. The machine makes a mistake. No one has to come to these kids into the advantages of knowing. They do quite well with the socialization of the machine. The machine makes a mistake of the teaching process are changed. Many of these books work for hours at a time on the machines and graduate from jail to college.

## Making the Human Garden Work

BIOLOGICAL inventory and regulation. It is stupid if not immoral to fail a hypoglycemic patient by not regulating his glucose supply. His brain had better be able to function before we offer him the choice of setting his own bedtime, regulating his own diet or learning how to read. A firm, clear diet often tells the whole story.

BOUNDARIES that are remedial, clear, consistent and real. The child knows what and whom he can depend upon. It really doesn't seem to matter very much if the boundaries are actually fair, although it is nicer if they are. Sometimes, as the farmer said, a misbehaved client needs an attention getting device like a two-by-four applied suddenly between the eyes. Tough, honest language often does it. After gaining his attention we give him a list of things to do, and we say, "Choose one." (At last analysis about ten per cent of our students were mules.)

TIME to relax, regularize, recuperate. The patient is almost certainly under chronic high arousal, has difficulty sleeping, is quick to startle, overreacts and has a badly regulated metabolism.

A good deal of doing nothing is often the first prescription.

## GOOD SLEEP.

COMPETENT people who are warm, touching, friendly.

Everything else is aesthetics.

Jose's reading problem is Jose. Or to put it another way, there is no such thing as a reading problem. Jose hates books, Jose hates books, and teachers, and among a hundred other insufficiencies—All of a piece —he cannot read. Is this a reading problem?

A reading problem, in short, is not a fact of life, but a fact of school administration. It does not describe Jose, but describes the action performed by the school, i.e., the action of ignoring every thing about Jose except his response to printed letters.

My own demands were an important part of Jose's experience. They were not simply the demands of a teacher, nor of an adult, but belonged to my own way of caring about Jose. And he sensed this. There was something about my demands that he sensed. It was on him. This became all the more evident once he realized that I wasn't simply processing him, that is, grading, measuring, etc. And when he learned that he could refuse—could refuse altogether to terminate the lesson, could change its direction, could insist on something else, we became collaborators in the business of learning. ... It boils down to this: we adults are entitled to demand much of our children. ... The children are entitled to demand that we be treated as individuals, since that is what they are.



## WATERING

Outside D.R. snapped his fingers and said, "Shit, Leonard. I've got to water the rabbits first."

Leonard looked pained. "Didn't you water 'em last night?" D.R. shook his head. "They all still had some water in their crocks. I fed 'em. I thought I'd water 'em this morning."

Leonard was plainly pissed off, but all he said was, "Always water your stock at night, son. Don't put that kind of thing off." Working together, the two men carried the water can out to the trough. They filled the crocks in all eleven huts in ten minutes and then went on down the hill to Leonard's house for breakfast.

Teaching  
Learning

395



## How To Survive in Your Native Land

*I like, enjoy, learn from this book of school adventures. I can see that anything will drive a person either crazier or saner. This book may help on the same end.*

—SB

## How To Survive in Your Native Land

James Henderson  
1971; 192 pp.

from:  
Simon & Schuster, Inc.  
1 W. 39th Street  
New York, N.Y. 10018

or WHOLE EARTH CATALOG



... Couldn't I have it! We soothed him, agreeing to tell Pison in no uncertain terms and so on. We walked out into the field, who had learned and had begun admiring the kite in retrospect, realizing that there was no way such a creation could fly (aerodynamically speaking, he said), and yet it did fly and this Pison or whatever his name was to be a pretty exceptional kid, and we were agreeing and realizing that a great guy Lou was for a principal even if, we reminded him, he had goofed up our schedule for this marvelous class we'd planned which had resulted in that extraordinary kite and other grand exploits, along with a certain amount of difficulty for him, Lou, and how well he'd handled it and supported us and ... when Lou suddenly screamed Aaargghh and fell back. I thought he'd been stung by a bee—we'd had a lot of bees that year, which also interrupted Egypt quite a bit, flying in the classroom where kids could scream with fake or real fear or try to kill them by throwing objects, often Egypt books, at them, exempt from retribution by the claim that they were just trying to save some allergic kid from death—but then he screamed There it is again! and pointed up, and there was The Monster From Outer Space, seventy-five feet up, plunging and whirling and lurching through the thin air, a ton of boards and heavy paper and prods and toothy vents leering down at an amazed lunchtime populace of little seventh grade girls, all with mothers and fathers. Jesus Christ, look out! yelled Lou, and rushed for the playground, just as the giant came hurtling down like a dead flying mountain. It was the plane's wings that girls scattered. Their mothers reached for crashed, seventh grade girls scattered. (The children reached for the phones.) Kids rushed from every direction and hurried them-selves at the kite. They stomped it and tore it and killed it in wild-

## On Federal Help

July 20, 1970

Hon. John Brudeman, Chairman  
Committee on Education and Labor  
Select Subcommittee on Education  
U.S. House of Representatives  
Washington, D.C. 20515

Sir:

Thank you for the opportunity to testify before your committee.

I am delighted by the spirit behind your Environmental Quality Education Act (H.R. 14753) and depressed by every measure in it.

I'm a former ecology student, and I can report that ecology as a science is pretty broad. Definitely not for everyone.

Ecology as a metaphor, as a religion, is tremendously exciting, and everyone can get a piece of the sermon.

However, this voluntary mass education could be poisoned by Federal "help," as highly-intentional over-specialized application of fertilizers and pesticides has damaged other natural growth processes.

In my experience, the whole apparatus of application, approval, and funding committee introduces a dishonesty into an operation that can never be eradicated. And if the operation is educational, dishonesty is the death of it.

I see that the bill proposes for preparing information specifically for mass media use. Involvement of Government with mass communications in this manner strikes me as dangerous as rejoining Church and State.

If Federal funds are to be spent on environmental matters, let them go to:

1) The space program which has given us the anti-environmental perspective to see our planet whole and alive and in hazard.

st gee. They lynched it and murdered it and executed it and mercy-killed it and put it out of its misery, and when it was over and he had everything he needed, the corpse of the kite and the kite sitting down on benches and shut up there was nothing left of it but bits and pieces of painted butcher paper and 1 x 2 boards and clothesline rope.

The school's purpose is not teaching. The school's purpose is to separate sheep from goats. ...

2) The World Game of Buckminster Fuller's. This computer operation is planned to perform for the Earth as NASA's computers did for Apollo 13. (Inventory resources, assess damage, compare alternative "futures," select the most promising, consistently.)

3) Contingency planning for environmental disasters comparable to long-range planning in the military.

4) A "net" NASA to investigate the sea and treat it like Antarctica, as a fragile, non-national environment. (Use of the oceans must be governed from a strictly environmental standpoint by an international body with a great deal more power to act than the U.N. has.)

5) Rehabilitation for ecological disaster areas such as Lake Erie and Appalachian strip mine country.

6) Ecology Action-type groups, but only for services rendered. Do not fund them, do not tax them, do not pass laws about them. When they perform a service to Government, such as investigation of environmental crimes, pay them for the information.

7) Follow-up reports by independent groups of Federal actions affecting the environment. Do this as a built-in part of initial funding. Appropriations for a dam or a war would include money to go to the National Science Foundation or the Audubon Society or whoever to study the environmental effects of the project and report on them.

I realize that practically none of the above are the province of an Education Subcommittee.

John Holt has suggested that if we tried to teach infants to talk, they would never learn to read. It is the same with ecology. It must be learned. It is being learned. If you try to teach it to people, you will only teach them to hate it.

Let it be.

Stewart Brand  
1970; 293 pp.  
Menlo Park, California

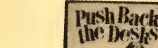
... All of the talk about motivation or inspiring kids to learn or innovative courses which are relevant is horseshit. It is horseshit because there is no way to know if students really are interested or not. No matter how bad the school is, it's better than jail. ...

A while back at Spanish Main School, it came to pass that Immature was out of style, and Non-Achiever was in. That is what drives everyone mad at a school, even if no one is aware that they are being driven mad. Humans like history, like to know why things are and, like to have reasons for it, and the school never has any reasons. It doesn't have any because, in fact, it doesn't have any. ...

## Push Back the Decks

Every effective teacher has had projects and ideas which really turned kids on, but most of them don't take the time to write about just what it is that makes their classes remembered by former students as "one of the best years ever." Albert Culum, with his enthusiasm and involvement with the major strength of the book is its ability to awaken a hundred or so related ideas in the teachers who read it. It is teachers like Mr. Culum who epitomize the best aspects and possibilities of the self-contained classroom for elementary school children.

(Suggested and reviewed by Carol Guyton Goodell)



Push Back the Decks  
Albert Culum  
1967; 223 pp.

\$2.50 postpaid from:

Four Winds Press  
50 West 44th Street  
New York, N.Y. 10036

or WHOLE EARTH CATALOG

## Hooked on Books

If you're wrestled with ways to teach a non-reader as a teacher, if you've wondered what you could do as a businessman to help an obviously weak reading program in your schools, or if you're the worried parent of a Book Avoider, then you'll tear through Hooked on Books with a firelike fervor fed on rekindled hopes.

Fader's program involves the saturation of students' surroundings with newspapers, magazines and paperback books because they are written on subjects relevant to the world outside a classroom. Diffusion of such materials among teachers of all subjects and the use of writing, writing and more writing as the primary way in which to teach English is another important tenet of this program.

It is a detailed report on an exciting and practical way to teach reading, and it's laced with such well written anecdotes about the inmates of Maxey Boys Training School where this program was first tried that Big Bill, Supac, Hognan, and Lester the Poet seem as real and as teachable as they were to the authors.

(Suggested and reviewed by Carol Guyton Goodell)

Hooked on Books: Program and Proof  
Daniel Fader and Elton McNeil  
1968; 236 pp.

\$7.95 postpaid

from:  
Berkeley Medallion Books  
200 Madison Avenue  
New York, N.Y. 10016

or  
WHOLE EARTH CATALOG



Those of us who participated in selecting the original 1,200 titles for the Maxey paperback library will never again have to be reminded how little we know about the students we teach. None of us will forget the untold 700 titles that we treated our gleaming drugstore spinners while the boys read and reread the ones they liked. The 500 winners of our book Derby are included in the Reading List (pp. 146-173).

The boy turns, pulls out of his shirt Dick Gregory's From the Back of the Bus, waves it at the teacher, and shouts, "I bought it, man, I bought it!" Bought four more while he was there. Didn't steal none! Bought or stolen, those five books were the first that boy had ever owned.

## How To Change The Schools

An outraged parent can hinder or help a bad school. Here's how to help, and how to hinder in the right places.

—SB

## How To Change The Schools

Ellen Lurie  
1970; 293 pp.

\$2.95 postpaid

from:  
Random House, Inc.  
Westminster, Md. 21157

or WHOLE EARTH CATALOG



... the moral which has been indelibly stamped on my brain is that community groups must not fight each other, because when they do, only the school system wins. When the black parents demanded integration, the system killed the responsible militants. When the white parents demanded educational improvements before they would accept integration, the system labeled them irresponsible bigots.

Meanwhile, in Washington Heights, bustards of black children were being transported into our neighborhood schools, only to be completely abandoned once they arrived. The schools which "received" them were given no special devices, the teachers were given no special training. The black children were left to learn as best they could, and having suffered years of educational neglect, they often failed. The white children watched the black kids fail, and had all their preconceived prejudices reinforced.

It seemed almost as if the bureaucrats downtown had arranged this nightmare program so that the white parents could see that black parents and the black parents could fight back. And the more the parents argued and fought, the more the professionals at the Board of Education could say, of all parents, "You see, those people cannot be given any authority; look how irresponsible they are."

You and other parents might organize a campaign to have all children who have been labeled "slow" or retarded segregated by non-Board of Education specialists. Get a volunteer team of doctors to check their eyes. Hundreds of "slow" children have turned into geniuses overnight when they got eyeglasses. Insist that all Spanish-speaking children be retested in Spanish.

Principals will try to "buy off" the most articulate parents in your group by assigning their children to the top classes and best teachers, or offering to transfer them to a "better school." Don't attack or offer to transfer them to a "better school." Remember their children, too, have to be on one child's list of demands. Find ways to include these parents in your committee so you can still work together.

The school system destroys many many children. But, just as important, it destroys many many teachers. It does not care about teachers any more than it cares about children. It does not care about teachers achieve any more than it helps children achieve. The system enforces the horrible energy-draining, time-consuming, and terrifying. It rapidly demoralizes them, squeezing and twisting warmth and compassion out of them, turning them into non-thinking machines which obey and enforce automatically the rules and regulations of the bureaucracy. ...





## Catalog of Free Teaching Materials

The 7th edition of a constantly updated source book for teachers and other educators of free things for a class—maps written information, an occasional free sample from some company, filmstrips, charts. This edition good for 1970-73. The introduction says that "materials in this book have been evaluated by accredited teachers, and only those items which have direct bearing on the curriculum have been included." Items are listed alphabetically by subject, and annotated to provide for clear ordering instructions and information about the exact nature of the materials.

Dense, comprehensive, and clearly read.

[Reviewed by D. Smith.

Suggested by Big Rock Candy Mountain]

## Catalog of FREE TEACHING MATERIALS

### Catalog of Free Teaching Materials

Gordon Salisbury  
1970-1982 pp.

\$2.68 postpaid

Catalog of Free Teaching Materials  
P.O. Box 1075  
Ventura  
California 93001

The Story of Water Supply (15 pp., comic book style) (4.8).....	1008
Water Facts—P.A.357 (14 pp., sources, supply, uses, etc.) (6-A).....	785
Water Resources—Development and Use (quite detailed with charts, etc. 68 pp. (10-A).....	456
What You Can Do About Water Pollution (1 p. pamphlet) (6-A).....	210
A New Era for America's Waters (current interest and concern about pollution) (1970-73) (10-A).....	910
National Estuarine Pollution Study (report on abatement, surveillance and controlling agencies, 1968, 12 pp.) (12-A).....	910
National Estuarine Inventory (info. on the economic and ecological values of each estuarine system and needs for waste treatment, 1968, 80 pp.) (A).....	910
The Potomac River Estuary: A Supplemental Source of Municipal Water for the Washington Metropolitan Region (a study by the National Parks Assoc., 1968, 16 pp.) (10-A).....	287
Water Impurities—No. 2737 (18 pp., booklet) (8-A).....	702
Water Resources Summary for Southern California, 1957—No. Circ. 404 (22 pp.) (10-A).....	703
Water—Its Use in Diesel Locomotives (16 pp., scientific information on water) (12-A).....	160
An Outline of Modern Water Treatment Equipment No. 4433 (water softening) (A).....	910
Summary Report Advanced Waste Treatment (renovating wastewater for reuse—technical, 96 pp.) (A).....	702
New Water (general info. on the conversion of sea or brackish waters to fresh, 1968, 27 pp.) (6-A).....	927
The A-B-Seas of Desalting (diagrams and info. on the conversion process, crystallization, membrane processes, chemical processes, etc., 1968, 40 pp.) (A).....	927
Saline Water Conservation (guide of demonstration plant in Freeport, Texas) (10-A).....	927
Saline Water (1966 conservation report, 340 pp.) (A).....	927
Kernel of Wheat (wall chart, 17x22 schematic diagram showing structure and principal parts) (8-A).....	260
From Wheat to Flour (the story of man-in a grain of wheat, 76 pp.) (7-A).....	260
Grains, Origin of Breakfast Cereals (chart, 16 x 22, cut-away of barley, oats, corn, rice & wheat) (5-A).....	452
Wheat in the Eastern U.S.—AB-250 (kinds, uses, and growing of, 28 pp.) (12-A).....	382
GTA Digest (sample copy dealing with grain co-ops, 63 pp.) (8-A) (10).....	726
They Broke the Trail (story of wheat and Oregon Wheat Commission, 1965, 8 pp.) (7-A).....	120
The Canadian Wheat Board: Flour Milling Past & Present (history of mills and processes, 1967, 48 pp.) (10-A).....	835
The Wheat Adjustment Problem—Potential Economic Impact (46 pp., production patterns, utilization patterns, etc.) (10-A).....	456

## Catalog for Learning Things

All manner of dandy low-cost tool kits, materials, animal cages, and funky kindergarten furniture.



—SB

Catalog from: The Workshop for Learning Things  
5 Bridge Street  
Watertown, Mass. 02172

Several years ago, the Workshop ran across triple-thick corrugated cardboard for the first time. We began to design and build with wondering how many conventional building materials—lumber, plywood, masonite—it might replace. Since then, we've used thousands of sheets of it, much of it in workshop studies with people using it for the first time. It has given us all at a part in shaping learning environments.

This laminated cardboard is three layers thick and comes in very large sheets. It is inexpensive, compared to plywood, yet it is strong. Used with a good eye for its strengths and shortcomings, it can be as durable in a classroom as more expensive materials. Furthermore, it can be worked with simple tools and requires few or no woodworking skills. The inventory of things made by teachers in recent workshops is endless—chairs, carts, tables, easels, playhouses, jungle gyms, boats, giant globes, cages, aquariums, desks, carrels, seatwheels, sandboxes... This combination of cardboard, tools, techniques, and people we call Cardboard Carpentry.

### BASIC CARDBOARD CARPENTRY TOOL KIT

- 5 10-point carpenter saws
- 2 double bladed hand saws
- 2 paring knives
- 2 wooden mallets
- 2 point hole punches (1/4")
- 1 1/2" hole cutter
- 6 yardsticks
- 2 wooden wrenches
- 8 dowels (1/4" by 36")
- 1 die
- 2 spring clamps
- 40 threaded wooden nuts
- 15 dowels (1/4" by 36")
- 10 threaded dowels (1/4" by 36")
- 2 rolls cloth tape (2")
- 1 bottle white glue

\$75.00  
weights 20 pounds

## Children's Music Center

Music and dance instruments, records, and books for kids. Also history and contribution of black and Spanish-speaking Americans.

### Catalogs

free  
from:  
Children's Music Center Inc.  
5373 West Pico Blvd.  
Los Angeles, CA 90019

—SB

### DF35 COMPLETELY WELL

#### B. B. KING

12" L.P. Record ..... 4.98  
A great blues collection by "King Of The Blues." B. B. King with his blues guitar singing "Confessin' The Blues So Excited, Key To My Kingdom, etc.

### DF32 IN MY LIFE

#### JUDY COLLINS

12" L.P. Record ..... 4.98  
Collection of songs that Judy Collins makes an inspiration for movement. Suzanne (Leonard Cohen), Tom Thumb's Blues (Bob Dylan), Marat/Sade, In My Life (Lennon-McCartney).

### B785 SOUL ON ICE

Paperback ..... 1.95  
A collection of essays and open letters written by Eldridge Cleaver which he began writing in 1965 "to save himself." He wrote passionately and critically as a participant-observer about prison life, Watts, Malcolm X; Negro Heroes of the White Race; James Baldwin, Richard Wright, Norman Mailer; Vietnam; To Black Women from Black Men.

### EC24 LET'S BE TOGETHER

#### TODAY

12" L.P. Record ..... 3.00  
"Mistertons" relaxed songs for children and their families; Parents Were Little Once Too, I Like To Be Told, I'm Taking Care Of You, Alphabet Song, Peace and Quiet, Words on Jack.

### ★ EC25 WON'T YOU BE MY NEIGHBOR?

12" L.P. Record ..... 3.00  
Childhood songs performed in easy style by "Mistertons." Sometimes I Don't Understand, I'd Like To Be Like Dad, I'd Like To Be Like Mom, When The Baby Comes, I Like You As You Are, Words on Jack.

CR44 GOURD TONE BLOCK .....	1.35
Very deep hollow tone produced by striking, or striking over rubber over corrugations on wood block for gourd tones. Striker included.	
CR45 HANDCASTAS .....	set of 2 pairs 1.25
Japanese finger castanets in bright colors—very easy to play to get clicking sound.	
CR41 JUMBO SAND-BLOCKS .....	pair 90
5" x 8" with gripping knobs attached. Durable, easy paper produces deep swishing sound when blocks are rubbed together.	
CR112 FLUTOPHONE or TONETTE .....	90
Plastic—Key of C, Chromatic scale.	

## Kaiser Aluminum News

Don Fabun is doing very well at his job of making Kaiser appear comprehensive and futuristic. The Kaiser Aluminum News that he edits comes out several times a year, each issue devoted to one large topic, such as communication, transportation, food crisis, etc. They are excellent companions of current thought, vividly illustrated and laid out. Best of all, they're free if you write Kaiser for single copies.

—SB

Inquire for their list from:

Public Affairs Department  
Kaiser Aluminum and Chemical Corporation  
Kaiser Center 868  
Oakland, California 94604



I have yet to see any problem, however complicated, which, when you looked at it the right way, did not become still more complicated.

POUL ANDERSON

A hundred years ago a chemical theory was uncovered that retards broad significance. It is known as the "Law of the Minimum."

Under ideal circumstances, a reaction will continue until restrained by exhaustion of whatever essential ingredient is present in least supply?

What is that essential ingredient in the supply?

And how much of it do we possess?

We do not know.

S. P. R. CHARTER "Man on Earth"

According to legend... the Worm Ouroboros ate its own tail, and thus was a symbol of a world that survives by endlessly devouring itself.



A compilation of 6 issues of Kaiser Aluminum News about the next 20 years has been published in hardcover under the title The Dynamics of Change. The book costs \$6.95 from Prentice-Hall, Englewood Cliffs, N. J. 07632.

## Catalogo

I should like to suggest the following catalogue for your Whole Earth Catalogue: El Centro Comercial de Box 1074, San Antonio, Texas.

Many of us who live close to the border of Mexico are bilingual. Ask for CATALOGO 1966. It's free! 66 pages and contains:

Catalogs of books for sale dirt cheap—in Spanish e.g.

Doyle Science

Music and Songs

"The head of Pancho Villa" (someone cut off his head)

"Huckleberry Finn"

Poetry

Medical Guides

Medical Plants

Sex Education

Catholic Religious Articles & Books

Guitars & Acordion

Radio, Auto, TV Repair Books

Off Beat Books e.g. Mexican Penal Code & 1917 Constitution  
Mexican Playing cards—deck of 40

Service is fair. Everything is econo-priced and of Economy quality.

J.K. Lässig  
Houston, Texas

## NICEM Indices to Educational Media.

The National Information Centre for Educational Media is a clearing house for information about educational films, motion cartriges, filmstrips, overhead transparencies, video tapes and records. Information is stored on computer tapes and print-outs of these are published in the form of indices. Each index is for a separate medium, contains an alphabetic listing by title and by subject heading. Each entry gives information about the technical dimensions of a title, that is, size, black and white or color, with sound or silent, speed of rotation (for records), etc., etc. Also listed are the name and address of the producer and distributor of any item. About the only factors that are not mentioned in the catalogue are the price and an evaluation of the content of items.

The indices are available from R R Bowker Co., 1180 Ave. of the Americas, New York, N.Y. 10036.

For any questions about educational media write to

Nicem  
University of Southern California  
Los Angeles, California 90007.

## Nicem Index to 16mm Educational Films

2nd Ed., 30,000 entries

\$39.50 postpaid

## Nicem Index to 35 mm Educational Filmstrips

2nd Ed., 25,000 entries

\$34.00 postpaid

## Nicem Index to Overhead Transparencies

1000 entries

\$22.50 postpaid

## Nicem Index to 8mm Motion Cartridges

9000 entries

\$19.50 postpaid

Frank Kroger  
Venice, California

## Spoken Arts

A fine big collection of records, tapes, filmstrips of poets, stories, exotic songs, drama, and so forth. Records are \$6.50 each. Play Rikki-Tikki-Tavi again. Play Wallace Stevens again.

—SB

## Catalog

from:  
Spoken Arts, Inc.  
310 North Avenue  
New Rochelle, N.Y. 10801

Rubiyat Of Omar Khayyam  
Inaugural Address Of Washington,  
Lincoln, Jefferson, Theodore Roosevelt,  
McGovern (T)  
Adventures Of Tom Sawyer by Mark  
Twain



W. H. Auden: Selected Poems  
(C) W. H. Auden: Poems  
Wind In The Willows: Gramme

The Gift Of The Magi and The  
Last Leaf: O. Henry  
The Tale Of The Jumping Frog Of  
Calaveras County, The Professor's  
Yarn and The Man Who Put Up  
At Gadsby's: Mark Twain

Pit And The Pendulum: Edgar Allan  
Poe: Scourby

Just So Stories: Kipling (Volume I)  
Just So Stories: Kipling (Volume II)

Brendan Behan Sings Irish Folk-  
songs and Ballads

## Pacific Programs

Live up Current Events with some current events. Real  
and cassette, \$6-21.

—SB

## Catalog

\$3.00

from:  
Pacific Tape Library  
2217 Shattuck Avenue  
Berkeley, CA 94704

AP 1203 OVERPOPULATION AND OUR DETERIORATING  
ENVIRONMENT—Dr. Paul Ehrlich, author of "The Population  
Bomb," expands on his original thesis in a talk given February  
1970 at the First Congregational Church in Berkeley. The  
audience was appreciative, and the program should "be heard  
here and there everywhere," say the KPFA evaluators. 88  
minutes. \$13.50.

## Educator's Guide to Free Films

This is an invaluable reference if you are interested in  
film education. The book has indices of contents,  
film listings, cross-index; titles, subject, and source and  
availability. The source and availability index saves  
hours of time, although it does not indicate whether or  
not you need a special order form. It also indicates  
whether you pay mailing cost one-way or two-way.  
Every school or proto-school should have a copy.

[Suggested and reviewed by  
Chip Chappell]

## Educator's Guide to Free Films

1968. 784 pp., 494x335 times

\$10.75 postpaid

from:  
Educators Progress Service  
Rendolph, Wisconsin 53956

## CONQUEST OF LIGHT

(1964) 16mm Sound 10 min.

This film tells the story of the laser (sometimes called an optical  
maser), a device with almost unlimited potential in many areas.  
Although the film explains basically how a laser works and what it  
is, it does so in language clearly understandable to a non-technical  
audience. (Not cleared for TV)

Best System Telephone Offices

## CIRCLE OF THE SUN

This film, in full color, records one of the last gatherings of the  
Blood Indians of the Blackfoot Confederacy. It shows the sun  
dance, but it also reflects the predicament of the younger generation—those who have relinquished their ties with their own  
people but have not yet found a firm place in the changing world.  
(Available from the Boston, Chicago, Detroit, Los Angeles, New  
Orleans, and Washington offices. See separate index for addresses and  
dates served by each.) (Not cleared for TV)

Consulate General of Canada

## Follow Through Project

Education Development Center has far  
the best list we've  
seen of recommended  
instructional aids,  
materials, and supplies  
for the primary grades.  
Prices and suppliers  
are given with the  
items. The list (36 pp.)  
apparently is free.

—SB

[Suggested by  
John Holt]

from:  
Follow Through Project  
Educational  
Development  
Center  
55 Chepp Street  
Newton, Mass. 02160

## Playground Equipment

A list of playground equipment  
sources is available free from:

Council for Parks and Playgrounds  
15 Gramercy Park  
New York, N.Y. 10003

## Things a SCHOOL NEEDS

Desks, filing cabinets, sewing machines, televisions, radio phonographs, typewriters, DITTO machines, stove, refrigerator, freezer, toaster, camera, camera, and candle, projectors and screens, camping equipment, musical instruments, darkroom equipment, Good pocketbooks, Aps and crafts supplies, science equipment, Kitchenware, cleaning equipment, Gardening tools, building tools and supplies, Garbage cans, All paper products, Sod. New  
Devotion Community School, Rosemead, CA

AP 1168 AN ANTHROPOLOGIST VIEWS THE SOCIAL SCENE—  
Gregory Bateson talks at the Mental Research Institute in Palo  
Alto. One of his conclusions is that the commonly accepted way  
of looking at our world as "man versus environment" will  
soon prove lethal to a society with enough technology to take  
the idea into practice. Bateson gives mankind only a 50-50  
survival chance within the next 20 years unless radical changes  
are made. 46 minutes. \$5.00

AP 1189 CHINA OBSERVED—Neal Hunter, an Australian  
teacher, taught English in Chinese schools from 1965 through  
1967, and was on the scene for the first year of Mao Tse  
Tung's Cultural Revolution. Following his return, he wrote a  
book of the same title as this program, and is currently in  
Berkeley's Center for Chinese Studies writing a second book  
on his sojourn in Red China. A vivid and personal glimpse of  
life under Mao. 55 minutes. \$10.50

## Puppetry Store

Has a good catalog of puppetry books, and probably other  
puppet stuff too.

—SB

Puppetry Store  
Ashville, Ohio 43103



## Cloth Diagram—Lewis Mahlmann

For those who like to sew — not  
the rag doll type but a shaped pattern  
that even permits you to change the  
profile of the face to change the  
character. Step by step, very definite  
instructions.

Price — \$1.00

## Introducing Puppets

Peter Frazier

Again, a book for the beginner,  
and yet a book for all.

Nothing new or unusual but the  
author has taken the best of many  
construction methods, gathered them  
together in a systematic way, and  
filled almost every page with clear,  
explicit drawings that anyone can  
understand and follow, — full pages in  
most cases, excellently executed.

Shadow puppets, rod puppets, hand  
puppets, and marionettes, — there are  
plans for construction of all, together  
with good stage plans, and many  
extras.

Perfect for new members just  
starting in puppetry.

8 x 8 — 120 pages \$6.95

## Puppet Theater Handbook

Marjorie Batchelder  
(full 69 pages of diagrams  
by Doug Anderson)

The Handbook covers practically  
every phase of puppet construction  
and production. Contributions from  
more than 50 outstanding puppeteers  
make this a complete manual of construction  
and production. Often referred  
to as the Puppeteer's Bible,  
Bibliography and Materials Supplement.  
If you can only buy one book,  
this is it.

6 x 9 — 293 pages \$6.50



THE PLAN

Leonard said, "What we want to do now, David, is fence in this  
place here where you see it's already. This sheds one from the  
barn, but later on in the heat of the day those scyammers over there  
shade this same spot pretty good too, without keeping the sun out  
completely. I've studied this side, the other side, the other side, this  
morning and then along about the middle of the afternoon it comes  
in from the road-side pretty good. If we do a good job fencing,  
those hog'll have a good place out here."

"What we'll do, David, is just come right out from the two  
corners of the barn there, make it square on that end, come out  
about twenty feet on this side, and I figure about twenty six on that  
side over there because of the old stump. It won't be square on this  
end and we'll have to dig an extra posthole or two, but that'll be  
easier than trying to fight that old stump, and the hog'll be glad of  
the extra room. I don't expect to win any architect's prize with this  
pen, but it'll be solid if we get the posts in good, and that's  
what we're interested in."

"What I'll do, David, is mark off where we want the posts to go,  
and work with you a little to get you started. Then while you dig  
I'll take the truck into Blaine and get the posts and my one-by-  
sixes, hit I guess I better get nails too. I'm sorry I'm so disorganized  
this morning, but it's just piled up on me so bad I ain't thinking  
too straight yet. But we'll get fixed out. It's a little after seven  
now. If we get the holes dug this morning and I get back with the  
fencing material by dinner time, we might not be in as bad shape  
after all. Get those diggers off the truck, what you don't you David, and  
I'll goe around a little with my spade, and we'll just light right  
into it and hush talking about it."

School Things  
Learning

299



Graves-Humphreys Shop Equipment

An enormous catalog of good stuff available only to schools.  
Wonderful prices.

Graves-Humphreys, Inc.  
Box 1240  
Roanoke, Virginia 24006

—SB

KELLER "JEFFERSON 601" SAW  
the LITTLE GIANT of Power Hack Saws  
Capacity 5" x 4"

- Precision built on reverse stroke
- Ad. Hooking Bar
- Two Speeds: 180/180 rpm.
- Blade: 18" x 12"
- High Speed Steel
- Stroke: 3-3/4"
- 1/3 HP at 1725 rpm.
- Capacity 5 1/2" x 4" Ad. Saw
- Size: 5'12" x 45" x 45" 3/4"

SPECIFICATIONS  
Bench size ..... 11-1/4" x 34-1/4"  
Total height ..... 16-1/2"  
Ship. Wt. .... 87 lbs.

Complete with Single Phase 110V motor, Ready-to-run

\$99.50

"Jefferson 601" Floor Model - \$114.50  
"Jefferson 601" Portable Model - \$127.50  
For 3 Phase 220/440V motor and starter for any "Jefferson 601" add \$30.00

CRAFTOOL  
CARVING TOOL SET

Consists of one Vainer, one Shallow U Gauge, one Knife, one Chisel and a Sharpening Stone. All tools are equipped with varnished hardwood palm-grip handles and measure 45/8" long. Forged and heat-treated steel blades used throughout. A perfect set for doing fine carving.

No. 528AZ ..... \$7.25

BLACKSMITH'S ANVILS



TEMPERED  
SOLID TOOL STEEL FACE  
The face is one solid piece of high grade steel thoroughly welded to the body of the anvil. It is accurately ground and tempered. The face is fitted with a true hag-hole for use of anvil tools. The horn is made entirely of tough untempered steel.

No. 7 10  
Wt. Each, Lbs. 70 100  
Length, in. 18-1/2 20-1/4  
Face, in. 11-3/4 12-5/8 x 3-1/2  
Height, in. 8-1/8 9-1/4  
Taper Horn, in. 7-1/2 7-5/8  
Hardie Hole, in. 1/2 3/4  
Pritchel Hole, in. 3/8 1/2  
Price Each \$52.80 \$63.80



REGULAR

Cutter is adjustable endwise and side-wise. Adjustable throat. "Handy Grip" Sides and bottoms ground. Black trim.

No. 94 made without adjustable throat.

No. Leth. 6 6 6  
9 1-5/8 9 1-5/8  
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HAND PLANES  
BLACK PLANES  
STANLEY

TINNERS' SNIPS  
WISS INLAND BLADES

Polished, inlaid crucible steel blades; black enameled handles. Precision ground and specially tempered to cut hard alloy metals.



MANILA ROPE

AMERICAN BRAND

PRIME MANILA ROPE

Per Ft. Per 600' Coil

1/4" 600 1000

5/16" 1350 1000

3/8" 1350 1000

1/2" 2650 1000

5/8" 4400 1000

3/4" 5400 1000

1" 9000 1000

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PERADAM was an event held at the 1969 Autumn Equinox to bring people from technological and long-haired worlds together. It was styled after ALLOY, the event organized by Steve Bae in New Mexico at the Spring Equinox, and some of the same people attended. [ALLOY is on p. 111.] Peradam was assembled by Dave Evans of the Augmented Human Intelligence group in Menlo Park. The gathering took place in a wooded canyon near Santa Barbara. The 3-day meeting did not have a particular program, and suffered for the lack. Also Alloy was a tough act to follow.

Participants came from SRI, Zomeworks, Potlatch Institute, Pacific High School, Panastus Institute, High Earth, Ecology Center, Southcoast, Beckwith & Langner, Office Design, Placitas, and etc. Steve Katona co-ed.

Here's some of what was said. The strongest staff school came from students and teachers from Pacific High School.

—SB

How do you continue to live a life of learning once you escape the institutions set up for learning?

Guerilla theater is usually about something that's already up to isn't satisfactory.

It's not enough to protest. We're trying exemplary forms.

Monks from the Zen Mountain Center.

It's the problem of being an American, to be sitting here with a full belly while the rest of the world starves.

In public health school I could sort of dig the idea of being a classroom Commando. But at Pacific it's obvious you're just faking yourself.

The Playboy guys came by and said they wanted to take pictures, and we said we wanted a wall, they said you got a wall.

The last active students right now are the new students. I guess it's right. They're going through shock.

What's our policy on drugs? "You're not free to get the school busted." It's the same with sex.

It's all show. It's the life show and the show show and we're trying to get them till they're all the show.

The hospital is right next to the stage and the kitchen is next to that. And we put the light show on the dish washing dishes and with all that energy the dishes just wash themselves.

## Apprenticeship Service Program

The program intends to give high school age kids an alternative to school learning by helping and encouraging them to find people and places of their own interest. It is a program of mutual learning and interest. In the traditional craft trades apprenticeships and apprenticeships in such things as farming, business, politics, ... after which a student may be competent to work in that field, and in apprenticeships to people such as doctors or lawyers where the student might still have to go to college if he wanted to work in that field, but would have a sense of what it is like to be a doctor or lawyer.

To receive high school credit the teenager and teacher would have to send us quarterly reports on their work. To receive a full-year's credit the student would need to work at one or more apprenticeships (maybe some school) for at least 1800 days of the year to meet the education code. Teenagers who wish to apprentice but do not want to be enrolled in high school can apprentice themselves and then enroll in high school (18-21 fit with the state) take high school equivalency tests, which upon passing gives them the equivalent of a high school diploma. (We do not know if there is a similar test in Canada.) The cost of this program for students who wish to be enrolled in high school is \$200. Scholarships are available. For those who do not wish to be enrolled we will charge \$30.00 if we find you your teacher. Eventually we hope to cover these costs out of donations. (All donations are tax deductible.)

Since we have been working on this program we have received many letters from teenagers. Some are full of wisdom and life, some full of determination and life, and some very touching pleas for help and life. We need the help of people to share their knowledge and/or help finding people who will. We need people who are open to open up their lives to the young and to encourage those around them to do it. If you can be a teacher or help us help us help teachers in your area—write. If you would like to be a student in this program—write. We can create a network of learning—a whole nation, a whole earth people's school.

Apprenticeship Service Program  
P. O. Box 908  
Hemlock, BC V3Y 9A7  
Tel: (613) 726-3578

There are no simple ways to give up deeply rooted expectations. There are some suggestions, however:

- talk to students outside class
- watch them play and watch them live with other young people
- play with them—joking games and serious games
- learn from them about yourself, what you care about
- listen

In these situations the kids may surprise you and reveal rather than conceal, as is usual in the classroom, their feelings, playfulness, and imagination.

There is a way a teacher can experiment with non-authoritarian teaching and be free of other teachers and supervisors. This way is to work with problem students—those students the school system has given up on.

We've been forced again & again to the old religious truth.

We've become anal about our own gifts. We're afraid we might bruise ourselves.

Computers are beginning to give the mechanic world a brain. And it's our job to give it a soul.

All I know is, when you fuck a robot, you gotta get a shot for lockjaw.

The machine doesn't solve all our problems. It gives us more problems than we'd have without it. Like the first airplanes. It'd be easier to ride a horse.

We're gonna choke on our own self-satisfaction ... Any of the things we do have an active life of about a year. It may be on the order of a natural law. Maybe people shouldn't have a sense of failure ... The things that sustain us are the trickle of information, but what pushes us on are the new tricks. Get what you can out of it & move on.

They zoned Soler's place as habitable sculpture.

It takes 500 people to incorporate into a community.

The guys I went to high school with are just about running the country now. I didn't get along with them. Nobody here did.

At various times the situation has become very entropic. We seem to be taking the attitude this year that there are certain kinds of urgent things that need doing ... We have some 20 boarding students. All the staff is living at the place. If you want a place to live you better build it, and you better find out what the design considerations are. It isn't enough to say I am a teacher and my door is always open. We are going to do music at a certain hour on a certain day.

Yogi, Sociology, Math, Music, French, Biology, Lockdown—those things have the fields of competence of the staff who are there.

The changes that can come down in 10 days are just real. There may have been a revolution while we're here.

The last active students right now are the new students. I guess it's right. They're going through shock.

We gave everybody a spoon and the rule was you couldn't feed yourself.

At first there must be a dream. Then economy or technology or whatever.

On Friday we take off to places that we think might have educational value like the beach, or here.

The director was brought up in a Catholic orphanage, where his tongue developed a fine cutting edge.

We have a student who wanted to build a submarine. We have a nice lake. He took over the shop and started putting together this thing. We can't get this kid to do anything else. The fallout from the submarine completely covers the shop and the adjoining art room. He keeps assuring us that it's nearing completion.

I went back to my old high school, and the kids were just going saying fuck luck and getting loaded. And I had changed more in a week than they had in all year.

We don't know whether we're on a 5 year thing or a 600 year thing.

We got a lot of myths we plug into.

Tires can be made into sandals.

Sex & violence are kind of related. (Girl in the audience:) No shit.

Something weird in the heart of language is what's fucking us up.

Jail is the national monastic center.

You learn something different when you do it yourself.

They all crap in the same sewers. That ought to bring them together.

All that amateur radio operators do is talk about the weather and describe their equipment. Those media are really ripe for infiltration.

We're starting with an incredibly powerful technology, and what we've got so far is an incredibly primitive technique.

There's a whole mass of information stored in the computer. It's a filing cabinet that's so fast and so together that it makes a whole different kind of difference.

We called our group at first Bum Academy.

Entrance requirements: You must walk from Tokyo to north of Japan to south of Japan, with no money.

Preparing the student for "the Future", the high school will prepare you for college. And college will prepare you for a job. And a job will prepare you for retirement. And retirement will prepare you for death. We call that "The Sorrowful Round." It's based on the present, not the future.

It's really far-out to look at a teacher as an overgrown student, and a friend.

The students ask to graduate. It's a puzzle of the staff to decide. We handle it in a smoke filled room. We get the student in there. We have certain criteria which we hold up against the student:

- 3 quarters of attendance (we've graduated some at 18)
- is 18 years of age
- clear idea of what he wants to do

## WANTING TO QUIT

After the sixth hole, D.R. wanted to quit. It wasn't his body that wanted to quit. His hands were hurting a little but his strength was flowing good and his arms and back felt better to go on with it than when he'd started. It was as good as a victory, a triumph, an invitation from somewhere deep inside him to lay down the tools and just arbitrarily quit.

Not to stop to rest. Not to get up by the barn and leave his back against the wall and sip water from the half-gallon Mason jar Leonard had left.

But quit.

For the day.

Just stop right there where he was, ten inches deep into the seventh hole, and go down to the store and hang around a while, or else back to the home.

It was like some kind of sour bile swimming through his head. His hands and arms bed back worked on well, but his mind, his mind was terribly dissatisfied to be with nothing to do but observe his arms and hand and back.

him, it was an argument from the very depths of itself to stop this work end, at the very least, take it easy for a while.

Look how much you've already done it said. Six holes already, look at that. That's a morning's work for any man!

Not for Leonard, D.R. said.

Fuck Leonard! the message said. You've got the whole afternoon to dig three holes. At least go to dinner and rest for a couple of hours.

All right, said D.R. Soon as I finish this hole, I will.

And he dropped the diggers and headed the sledge on that one. I'll get a start on number seven and then quit, D.R. said. Let me start number seven and I'll stop a while.

And he said the same thing again when he had finished the seventh hole, and gone on to number eight.

And then nine, and then ten. Let me finish ten, he said. This one more, and then I'll quit for the day.

D.R. finished the tenth hole. He headed the sledge on that one. Eighth inches down he came into thick rock, and he needed the sledge and the bar, and the sledge and the bar together, and then the diggers, little pinches of earth and rock at a time. That one hole took him over half an hour of solid work, but he finished it, and was starting the eleventh hole when Leonard came back with the lumber.

"You getting tired?" he said.

"Not 'wow! look how much work you did!'"

"Not 'Congratulations, David, you're the most fantastic hole-digger I ever saw.'"

"Not even." "It looks like you've worked hard while I was gone." "Just." "You getting tired?"

"Not too bad," D.R. said.

"Do you want to take a break while I unload this stuff," said Leonard. "Then we'll go see what Roark's fixed us to eat."



The Open Classroom

Herbert R. Kohl

1969: 116 pp.

\$1.65 postpaid

from:

Random House, Inc.

Westminster, Md. 21157

or WHOLE EARTH CATALOG

A teacher in an open classroom needs to cultivate a state of *suspended expectation*. It is not easy. It is easy to believe that a dull class is dull, or a bright class is bright. The words "emotionally disturbed" conjure up frightening images. And it is sometimes a relief to discover that there are good pupils in the class that is waiting for you. Not reading the record books and ignoring the standing of the class is an act of defiance; it involves casting aside a crutch when one still believes one needs it. You are one wants to develop an open classroom within the context of a school which is essentially totalitarian, such acts will be necessary.



## Start Your Own Skool

The legal and practical rudiments. Particularly for California.

—SB

## Start Your Own Skool

\$1.00 postpaid

from:  
New Directions Community School  
445 Tenth Street  
Richmond, CA 94801

Addenda: the surplus hardware program requires that you have a letter from a public school saying they except your credits. The surplus food program does not & is beautiful. Start a lunch program; there's even food for "outdoor education programs": camping trips. / If once you're non-profit, file Form 537, exempt from excise taxes; i.e., Fed. gas tax (4¢ per gal.). Then talk to your friendly gas station (might have to get a credit card, or save receipts, ...). More fun: you must file annual info. forms for Fed. and State. In Calif., it's form 1998 and is simple. The Feds will require it starting 1990 or 71. Even if you're an "unincorporated association", it's easy, once you've balanced your books.

## Farallones Scrapbook

Another homemade collection of handy hints for new schools (or old schools that want to loosen up) or families that want to make things more interesting.

—SB

## Farallones Scrapbook

Sim Van der Ryn, Jim Campe, et al  
1971: 120 pp.

\$3.50 postpaid

from:  
Farallones  
Star Route  
Point Reyes Station, CA 94956

## Outside the Net

A radical education magazine with some useful stuff.

—SB

Outside the Net  
John D. Vanden Brink, Thomas P. Wilbur, eds.

\$2/yr. (3-4 a year)

from:  
Outside the Net  
Box 184  
Lansing, Michigan 48901

*Slim, the trucker, wasn't as black-hearted* as he seems from these statements. Because he was sorry for me he bought me a meal of two t-bone steaks and offered me a motel room when we reached Ft. Worth. I accepted the meal gratefully. Ironically enough just before he bought me the steaks the waitress told him that Red had died on the 1st of January. Men are such a curious mixture of good and evil; black and white. Who would have thought that a lanky, tough-as-nails truck driver would burst into tears upon hearing that his killer-friend had died?

Travel is the best education. The best way to meet people while traveling is to hitch. If you decide to leave school, jam a few paperbacks in your pockets, pack a bag and hit the road. It's nearly free. You'll learn about people and places.

## Summerhill Society

An information source on free school matters. It has New York and California chapters.

—SB

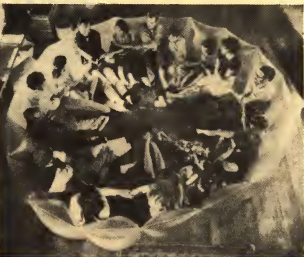
The Summerhill Society of California  
6063 Hargis Street  
Los Angeles, CA 90034  
New York Summerhill Society  
333 Lafayette Street  
New York, N.Y. 10012

404 Free Schools  
Learning

## Envirom

ENVIROM is a soft ring of lightweight inflatable pillows designed to bring people together in play, seminars, groups. Used by free schools, educational colleges, encounter and sensitivity groups. ENVIROM offers a relaxing and inexpensive alternative to institutional furniture. Constructed of heavy duty 20 gauge vinyl it withstands the toughest use. Folds to blanket size, weighs 20 lbs. Seats twenty in comfort.

[Suggested and reviewed (and designed) by Sim Van der Ryn]



Envirom

\$60.00 each

from:  
ENVIROM  
731 Virginia Street  
Berkeley, CA 94710

Here's what you will need/want for a hitching trip:

- 1 A large army-type duffel bag or a heavy laundry bag (white to be visible at night)
- 2 About \$10 for every 1,000 miles you want to travel
- 3 A large piece of white cardboard (12" X 24") and a black, felt-tip marker
- 4 A plastic rain poncho and a good sleeping bag for long trips
- 5 New maps from gas stations with extra information about major cities to be traversed. Cities and national borders can be major obstacles. Persevere.
- 6 A few cans of sardines, some peanuts, candy, crackers, cheese, joints, etc.

## Teacher Drop-Out Center

Teacher Drop-Out Center has identified (and continues to do so) schools — from pre-school to college, public and private — that have a relatively high degree of student-centered learning; few, or no, or non-compulsory classes; little, or no marking or grading; considerable student and teacher autonomy and independence; a low-pressure humane atmosphere where students can develop self-respect and a sense of dignity.

So far, they have come upon 500-700 such schools and they have established personal contact with these schools or are in the process of doing so. They have compiled a list of the schools and information about some is available from the Center.

Teacher Drop-Out Center acts as a clearinghouse of information on and a specialized placement service for teachers finding it difficult to function in traditional schools. They are interested in those who wish to make education relevant; those who truly believe in letting students grow into individual adults, awake humans in an atmosphere of love and acceptance; those who break the conformity and innovation and see schools as places for controversial ideas and innovations; those who want to be more than just babysitters or warm bodies in the classroom; those who feel they have to function freely as individuals with their own sense of style; those who believe that learning is an individual process best carried on by each individual exercising his own choice and going at his own pace.

They are open to inquiries from teachers or teachers-to-be. So far, they have helped and are helping hundreds of people get in touch with and find positions in schools.

Teacher Drop-Out Center  
P.O. Box 521  
Amherst, Mass. 01002

[Suggested by Bill Tully]

## Observations from Treadmill

One of the best new publications about education, young people, etc. is *Observations from the Treadmill*, put out by Mort Yonous, 357 Hadden River Rd., Northbury, Pa. 19072. It is one of the most interesting, long headed, and well written things I've seen — indeed, probably the best. The issue on drugs was way ahead of anything else I've seen on the subject. Your readers should plug into this. No subscription price. Get two issues and then pay what you think it's worth, if anything. Just the word.

Peace,  
John Holt  
Boston, Mass.

## Rasberry Exercises

free school knowhow with a forum format, how to start a school could be important collection point for new ideas. solid children's lib philosophy.

—jd

Rasberry Exercises—How to Start Your Own School & Make a Book  
Selli Rasberry and Robert Greenway  
1970: 125pp.

\$3.95 postpaid

from:  
The Freestone Publishing Company  
440 Bohemian Highway  
Freestone Sebastopol California 95472  
or WHOLE EARTH CATALOG

It's important to have liability insurance covering all operations of the school. A good private agent can get it for you for less than \$100 per year. You'll have to meet some standards to get it. Most states require workman's compensation insurance for employees. And be sure your car is covered for whatever use you put it to for the school.

"Pacific runs on promises -- and the basic assumption is that when one makes a promise (even if only in his own self-interest), he will commit himself to that promise, and he can be comfortable in trusting that others will keep their promises as well. Everyone has to care at least that much. Thus, the whole fabric comes apart when, for reasons of apathy, or whatever, little promises are not kept..."

Amy

## Teachers and Writers Collaborative Newsletter

Kid stuff runs as deep as you care to appreciate. Here is the work of kids and of teachers who know how to tap deep and get out of the way.

—SB

## Teachers and Writers Collaborative Newsletter

\$3/4 issues

from:  
Teachers and Writers Collaborative  
Part Center for Community Improvement  
244 Vandenberg Avenue  
Brooklyn, N.Y. 11205

one foot, one eye, sniff sniff is best can open in the world. He eats worms, rats and his special food is fried lobster. Before they go to bed they sniff each other's nose 16 times.

Unsigned  
Grade 6

"I told the teachers we'd proceed exactly as if I were doing a creative writing session and they were the students. I asked each person to complete on a piece of paper and then hand to me, anonymously, the following two sentences:

"Where I live..."

"Last night I dreamed..."

"Then we read some of them aloud, in random sequence, to form a 10 line poem (lines one and two from the same person, lines three and four from another person, etc.; each completed sentence treated as one line of the poem). We talked about the effects of the random grouping, then re-ordered the lines and talked about them..."

Last Night I Dreamed

Last night I dreamed that I was a hippy in the circus and everyone laughed at me. Last night I dreamed that I was a pro ball-player. Last night I dreamed that I had all the money in the world and everyone had to listen to me and I owned all the buildings and houses and I was so happy that I couldn't even laugh.



Many had a staggernaut,  
His friend was none as well.  
Instead he had shame on his  
on his back  
And was very big and tall.

It followed her to school one day.  
What she was an outcast  
It didn't help the school too much.  
And everybody else.







## Up Against the Law

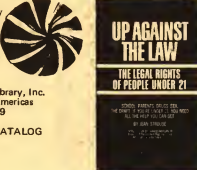
To be a teenager in the U.S. is approximately illegal. Nevertheless many survive. This revealing remarkable hard-working book can really help.

—SB

### Up Against the Law

Jean Strouse  
1970; 268 pp.  
\$0.95 postpaid  
from:  
Signal  
The New American Library, Inc.  
1301 Avenue of the Americas  
New York, N.Y. 10019

or WHOLE EARTH CATALOG



- Q: You have been suspended from school for two weeks and don't know why. Do you have the right to be told what the charges are against you?
- A: Yes. Any time school officials give you a punishment with serious consequences (expulsion, suspension for more than a few days — the number of days varies from place to place) they should notify you and your parents in writing of the specific things you have done wrong.
- Q: If you've applied to and been accepted at a boarding school or college and your father refuses to pay the tuition, can he be forced to pay?
- A: Yes, if he can afford it and the court decides it is in your "best interests."

### AGE OF CONSENT: STATUTORY RAPE.

(If you are a girl under the age of this chart, anyone who sleeps with you may be considered guilty of statutory rape.)

Alabama	16	Montana	18
Alaska	16	Nebraska	18
Arizona	18	Nevada	16
Arkansas	16	New Hampshire	16
California	18	New Jersey	16
Colorado	18	New Mexico	16
Connecticut	16	New York	18
Delaware	7*	North Carolina	16
Florida	18	North Dakota	16
Georgia	14	Ohio	16
Hawaii	16	Oregon	16
Idaho	18	Pennsylvania	16
Illinois	16	Rhode Island	16
Indiana	16	South Carolina	16
Iowa	16	South Dakota	16
Kansas	18	Tennessee	12
Kentucky	18	Texas	18
Louisiana	12	Utah	18
Maine	14	Vermont	18
Maryland	18	Virginia	16
Massachusetts	18	Washington	18
Michigan	16	West Virginia	18
Minnesota	18	Wisconsin	18
Mississippi	18	Wyoming	18
Missouri	16	Puerto Rico	14

\*Yes, even is the age of consent on the books. But other sexual offenses against minors, such as harboring a male or female child under eighteen for purposes of sexual intercourse, are crimes though not technically in consent of statutory rape.

- Q: If you're in a car that's stopped by the cops and there's dope in it, are you considered guilty of possession?
- A: That depends on state laws. In New York, if drugs are found in a car, everyone in the car is presumed to have had the knowledge that the drugs were there—unless they were concealed on one person. This means that if the cops find drugs in the glove compartment, everyone will be presumed to have known it was there; you may be able to present a case at trial that you did not, in fact, know the dope was there—but it will be up to you to disprove the presumption that you knew. If the cops do find concealed on one person, he's the only one considered guilty.

Other state laws vary. In California there is a case-law precedent saying that cops may search only the inside of the car incidental to an arrest—that is, they may not search the trunk or engine area.

### CHIPS & FPS

CHIPS means Cooperative High School Independent Press Syndicate. FPS means whatever you want. They're a service for high school underground papers.

—SB

### FPS

Six issues \$1 high school age and younger  
\$2 movement groups  
\$5 everyone else

from:  
Student Information Center  
3210 Grace St. NW  
Washington, D.C. 20007

406 What To Do  
Learning

## The Underground Guide to the College of Your Choice

A really fantastic amount of information packed in an honest, if somewhat clichéd style. The paradox about this book is that it seems to be written for freaks—or at least for those who are looking for alternatives to traditional academia; while the descriptions indicate how much traditional academia still prevails on most campuses. It does look very useful, though, especially in giving a real flavor and feeling for what's going on at different schools. A lot of the descriptions include how campuses are changing, too, which is very interesting in itself. I hope someone keeps it up to date, since one of its messages is that what it says now will be obsolete shortly. It makes it painfully clear that we need some new colleges.

[Reviewed by Diana Shugart]

The Underground Guide to the College of Your Choice  
Susan Bern  
1971; 509 pp.  
\$1.50

from:  
The New American Library, Inc.  
1301 Avenue of the Americas  
New York, N.Y. 10019

or WHOLE EARTH CATALOG



## University of Illinois Urbana, Illinois

Illinois is becoming more and more radical but still a Big Ten fraternity stronghold.

### SERGEANT PEPPER SECTION:

31,267 students of which 8,500 are graduates. 15% out-of-state. Freshmen must have completed at least six semesters of high school, submit either SAT or ACT scores, and be in upper one-third of their class. As long as there is space open in his chosen curriculum, there is room for him.

### ACADEMIC BULLSHIT:

The best departments are Engineering, Agriculture and Computer (the best computer school in the nation). In these departments the professors give the students a lot of individual help. No one seems to know of any exciting or particularly great courses or professors. Some Pass/Fail and all you need is a professor's sponsorship to get credit for a class you want to originate. If you can't get credit, it can be a Free U course. Third World studies started in various departments in 1970. The University requires that every student take a final examination in all classes. Some study abroad.

### BROTHERS AND SISTERS:

Ratio cats: chicks—2:1.  
They have their flocks here, but most of the kids are straight—the big thing for guys is jeans or slacks, button-down shirts or T-shirts and brown loafers without socks (in the spring). No one would be caught dead wearing white socks (very gauche). The straight's hair isn't especially long, but there is a bare brummel in every crowd who dares let a stray hair or two grow. The straight chicks wear their dresses and skirts and every now and then get into some pants. Lots of people wear those ugly University of Illinois T-shirts (which in the past were mainly gay but with the whole psychological craze are turning up in every crowd). As to the freaks (who are very few), long hair, no bra, tie dyes, jeans, hair bands, shoes and on strike. On the whole, there isn't that much health-food store. The closest "big city" is Chicago. The Greeks are deeply into the dating game—maybe 25% of the campus dates—while most everyone else is spontaneous. A date consists of going to a movie, and then to a bar or an afterparty.

As for the girls being liberated—"Any girl wants to do it, but is waiting for the right guy." The hip chicks will do it. Not that much shuck-n-buck here. The chicks are either just off the farm or from Chicago (so they are either naive as hell or know it all).

Intervention in the dorms just started about a year ago on campus—more pregnancies have been registered with the health center than in previous years. It is easier to find a chick who will have sex now than it was two years ago when things were extremely difficult—all the sorority houses lock their doors at night.

### SURVIVAL:

Getting easier. Plenty of dope, sex and politics are opening up. BC pills through student health and Planned Parenthood in area. No suicide prevention center. Draft counseling by student government, and the Draft Resisters Corps in the area. It's a Jig Ten school so football is still important. The campus paper is the Daily Illinois—a bore. Two underground papers: *Warrior* and *Green*. No health-food store. The closest "big city" is Chicago.

The merchants in the area are big exploiters, especially around Wright, Green and 6th Streets. Two of the dorms have "bad trouble with the black community" and so lock their doors at night.

## Private Independent Schools

I've been to a liberal grade school, an Archie and Veronica high school, a prestigious prep school [Exeter], a glossy college (Stanford), and the Army (Infantry). This book describes private schools throughout the U.S., Canada, and overseas. If I had a kid and the money, I'd use it. If I were a kid with parents with the money, I'd use it.

—SB

### Private Independent Schools

1946-1971; 784 pp.  
\$20.00 postpaid

from:  
Bantam and Lyon, Inc.  
238 North Main Street  
Wallingford, Connecticut 06492

### The Sidwell Friends School

WASHINGTON

The newest, newest school is a controversial day school, offering 11 years of education from kindergarten through Grade 12. Administrators offer the Sidwell and Upper Schools are a BPS Washington, D.C. school. The Sidwell Friends School is a day school, offering 11 years of education from kindergarten through Grade 12. Administrators offer the Sidwell and Upper Schools are a BPS Washington, D.C. school. The Sidwell Friends School is a day school, offering 11 years of education from kindergarten through Grade 12. Administrators offer the Sidwell and Upper Schools are a BPS Washington, D.C. school.

BETHESDA AND FOGGY BOTTOM: On the Williams Avenue campus, separate buildings provide classrooms and study halls.



for the Upper and Middle Schools. Administrative offices are in the basement. The school's facilities include the Science Building and gymnasium, the George H. W. Bush Senior Building, and the Food Service. The school is a day school, offering 11 years of education from kindergarten through Grade 12. Administrators offer the Sidwell and Upper Schools are a BPS Washington, D.C. school.

FACTS AND FIGURES: Headmaster Lawrence Smith, the headmaster, is a graduate of the University of California, Berkeley, and holds a M.A. from Columbia University. Before coming to the Sidwell Friends School in 1968, he was Assistant Director of the New York City Department of Education. He is a member of the National Association of Independent Schools and the National Association of Private Schools.

STUDENT BODY: The school's three levels, in addition to administrative and support staff, total 1,100 students. The school is a day school, offering 11 years of education from kindergarten through Grade 12. Administrators offer the Sidwell and Upper Schools are a BPS Washington, D.C. school.

ADMISSION AND COSTS: The school's admissions office is in the basement. The school is a day school, offering 11 years of education from kindergarten through Grade 12. Administrators offer the Sidwell and Upper Schools are a BPS Washington, D.C. school.

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### The Army

I am presently serving in the United States Army (Signal Corps) and would like to say that it (or rather certain schools it offers) is certainly relevant to independent education, your own personal feelings on militarism notwithstanding. If of course offers fine schools in electronics, design and living off the land. If it wasn't for the war I would most probably apply for airborne training, officer candidate school and Ranger school. However, things being as they are in Vietnam, I can't see myself being a platoon leader in a Long Range Reconnaissance outfit. The thought of it scares me shillsies, to be perfectly frank. I know Mr. Brann, someone who writes reviews was an airborne ranger, no offense intended.

I have the greatest respect for anyone who goes through just ranger school. I would look someone with combat experience as a Ranger with fascination and awe. Someone should probably review Vietnam, it is useful as a tool, since it is a medium where you can get stress, and camera equipment, jewelry, clothes, women and VD rather cheaply.

John H. Kirk  
Glendalen, Fla.  
I didn't make it through Ranger School. Quit. Too cold. —SB

## The New Religions

*One splendid effort of esoteric technology is our new and beautiful to topologists from the East such as Suzuki Roshi, Meher Baba, Bapok, Krishnamurti, Tarthans Tulku, and others. Jacob Needleman, young head of the Philosophy Department at San Francisco State, has perceived their various convergent messages and assembled a thoroughly useful catalog. He's as serious as any student, and he knows more than one thing at a time. I hope he will expand a later edition of the book to include Gurdjieff, the Native American Church, and the whole Sufi number.*

—SB

The New Religions  
Jacob Needleman  
1970, 245 pp.

\$5.95 postpaid

from  
Doubleday and Company, Inc.  
277 Park Avenue  
New York, New York 10017  
or WHOLE EARTH CATALOG

The contemporary disillusionment with religion has revealed itself to be a religious disillusionment. Men are moving away from the forms and trappings of Judaism and Christianity not because they have stopped searching for fundamental answers to the fundamental questions of human life, but because that search has now intensified beyond human means.

It has been said that every time and place has its own despair. The despair of California is the despair of people relentlessly getting what they want.

At Tanajajara, however, one comes to see monasticism not as a flight from society, but to society. The principle difference between the monastic society and ours is surely not that ours is more real, but that in this monastery everyone has a common aim. Moreover, this aim is for themselves: each to awaken to his true nature, each to find "his own way."

In such a community, there exists a constant danger that in the name of charity and kindness someone will find my way for me, will directly or indirectly tell me what to do, what is good and what bad. As a result, I may find myself not my own way. I will discover a nature, but not necessarily my own nature. . .

Some people say, "If I have a perfect social construction, we will not have these difficulties." But as long as there is human nature, nothing will help us. On the contrary, the more human culture advances, the more difficulties we will have in our life. The advancement of technology will accelerate this contradiction in our nature. When we realize the absolute presence of our contradictory nature, the way-seeking mind arises, and we begin to work on ourselves instead of the material world. Most people are interested in Buddhism are more or less critical of our social condition, expecting a better social framework.

Baba was sitting on his bed. Naked from the waist up. I think there were two other men in the room. And Baba just leaned at me, man, I always have difficulty talking about Baba. I mean, I'm not given to having visions or hallucinations. For me, it was just this incredible, extraordinary thing, like his head was the center of it, like emanating in all directions. It filled everything. To the extent that I felt tempted forcibly coming out of my eyes like a reaction to all this incredible light.

## Scholarships to U.S.?

*An old problem just plagued me again. There are lots of smart students in a place like Ethiopia who want to go to school in the U.S. They often ask people like me (suitable "Americans") how to find schools and/or money. For schools, access exists, in U.S. libraries. But for finance (if schools characteristically ask I pay expenses to be paid by the student) — a lot of bread for all but the university in, for instance, Ethiopia (the students) & I am stymied.*

*But I know there exist breaded people who see the value of getting minds in communion world round & would personally or thru foundations like to help bone fide (ie. all the test scores & recommendations) good students get it together. Is there some access info on this?*

John Morgan  
Village Technology  
Innovation Experiment  
Addis Ababa, Ethiopia

## Monday Night Class

*Steve Gaskin mixes class, the East, vibes, his audience, himself, and the universe real nice. I've been doing an informal weekly sermon for the past year or so and this book is simply transcriptions of several of his raps with the people. Its simple and straight; it helps me stay loose. Printed in purple.*

(Reviewed by Merce)

Monday Night Class  
Steve Gaskin  
1970

\$1.95 postpaid

from:  
Book People  
2840 7th Street  
Berkeley, California 94710

or WHOLE EARTH CATALOG

Keep your attention on a single point as long as you want. You have to learn how to be loose to do it, it's not a thing you can do if you're tight, cause if you're tight your attention will tend to fight. You gotta learn how to be just a loose observer. You have to really not give a damn too much about what's going on out there in front. You know, you gotta just look at it and it and see what it is and get the informational quality of it . . . Like you're supposed to groove. You're supposed to just really be grooving as hard as you can. There's a Zen master that says, "Although my heart is on fire, my eyes are as cold as ashes. You know. So then you can keep concentration really well when you're not attached. That's a loose place you have to be to play music or to ride a bike or any of those kind of places, where you have to have that loose mind . . . let it do it, concentrate it there, put it there in one place. Yeah."

We're all like little energy transmuters. You know those things that float in swimming pools and go sssshhhvvv and suck down all the leaves and bugs and sticks and stuff. That's what we are. We wander around through the world and take in all the vibes, transmute 'em through sensory and what have you, good dope, and put 'em back out, all accumulated. The way we do it is that we absorb the body energy at this level and then transmute it . . . We do other people's homework as if it were our own. We do the homework of all the people around us. That's how we help out, you know, by just refining those vibes everywhere we go.

In most square folks' ground rules it's considered impolite to notice that your conversational partner is neurotic. And what you do about that's another thing. Jesus, when he was giving the instructions to the apostles, told 'em when you go into a house, feel the house, and let your peace descend on the house, and if the house accepts your peace then you're cool. You stay there. But if the house rejects your peace go forth from that house and go forth from that town and shake the dust from your feet. Because there's a whole lot of folks aching to know. Don't bother arguing with somebody that don't want to know.

Laughing? I think laughing's just free good karma. You know, all the time that you're laughing you're wide open, you're non-linear, non-directional . . . it may be the best form of communication that we can do by mouth. Cause somebody can drop your cut-glass vase on the floor . . . and you can laugh and it's cool.

And you really got to be careful about that kind of thing, when someone's drunk, a lot of their consciousness is knocked out, and they're running a lot on their subconscious . . . and they're pretty telepathic and stuff at that stage, drunks and kids and people like that, don't ever lie to 'em. Don't lie to acedemics either. It's a waste of time.

Well, here's the thing that is one of the basic spiritual teachings that's been around for like ten or twelve thousand years . . . and it is that if you just quit paying attention to bad trips, pull your juice out of them, that they'll run out of juice, and they'll run down and stop. And they do that, because the karma is a little slower when you're not stoned, but it's the same karma and it works the same way . . . it's just a little slower, but it's not a bit different than when you're ripped. And where you catch your head you get that kind of thing. As you see so shall you reap. Well, that means that in an energy relationship if you feel that somebody's on a negative trip, first you have to be accepting and free enough to say that they can do that if they want to . . . cause they got free will . . . everybody's got free will. The next thing is that you also have to be choice in the matter and that's whether you pay attention to it or not. And if you pay attention . . . this is something I've found out so many times trying to take care of people who bring me a bad trip to sort out for them—you can straighten them and let go of them and they'll dive right back into it . . . cause they're looking for it, really. People who really want help, you just make a suggestion and they do it . . . and they get straight. I've seen that happen lots of times. If you put a lot of attention and energy into a down trip, you're stepping on a down elevator. And the vibe you're experiencing is exhilarating for awhile, but it gets pretty funky the farther down you go.

## Comix

*These ain't your run-of-the-mill comic books. At times they are gross, beautiful, or violent. Best of all, they can be very funny, and a good reminder not to take things [such as yourself] too seriously. Who sez comic books ain't relevant?*

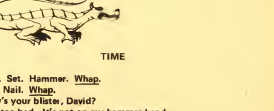
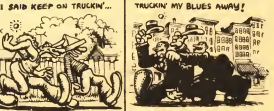
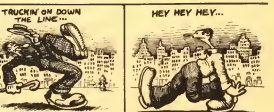
—Steamboat

(Adults only)  
Mail order lists from:

Print Mint  
830 Folger Avenue  
Berkeley, California 94710

Rip-Off Press  
Box 1416  
San Francisco, California 94114

San Francisco Comic Book Co.  
3339 23rd Street  
San Francisco, California 94110



Nail. Set. Hammer. Whap.  
Set. Nail. Whap.  
How's your blister, David?  
Not too bad. It's not on my hammer head.  
We'll get some turpentine on it when we get done here.  
Done.  
Get done.  
Two of 'em.  
Nail. Set. Sweat, slick, hand, whap.  
And then it was two eleven.



Times is **hot** jessir!

beatmic fine on another just looks  
strongly one ~~beatmic~~ fine on another just looks  
the living shit at of us

Some stuff never smelted into the light of day  
before. You know? Out there after further get hot.  
Under. Thunder. Bailing. **Everywhere!!** ... wow.

Now wideawake fine with no respect for old shit  
cooking us clean.

Thing is... what's been men do with a  
brand new nasty gob of your  
slap in his cap?

Despises of it, I guess, as efficiently as possible  
without getting too heavy about it.

And get on with the game.

But what **is** the game?

Is it, the GAME? Or the Game? Or THE game?

Damn if I can say for certain. All different.

SOME of the game is the question, some  
--and some **WTF** is

(over)

Now, I've decided to play an next question is:

What position?

Well, I'm glad you ask that question, neighbor, because  
I got not ONE NOR TWO BUT ~~THREE~~ **ANSWERS**!

1. Perfection of flat-out **MEET** Right?

2. Perfection of ~~MEET~~ **MEET** ~~MEET~~ **MEET**! ... otherwise  
you got two mumble asses underfoot all the time disturbing  
your meditations

3. Perfection of GOD. You might assume the accomplishment  
of the first two steps would accomplish this. No fiddling; that  
nearly brings us up to the completion of perfection  
~~with already continued~~, while the third task is more  
interested in fashioning **NEW** fantasies. Completion  
as opposed to Creation; two separate tasks though  
our position in the action may and probably  
be simultaneous or ~~otherwise~~ to spelled.

Yeah, but  
**WHAT'S THE**  
**POSITION?**

I was getting to that, neighbor. Just keep your  
blue-eyes open for some fast footwork out plans  
stop exercise plans STOP WORK OUT AREA FOR WORKING OUT  
PLANS STOP WORK OUT HEAR WORK OUT TEACH WORK OUT GOD  
IN AREA STOP.  
EXPLORE BATHING UNBAPTIZED TO HAPPENING??







*Jim Fadiman went to college and read all those books and readings in the social sciences and got acquainted with various pioneers and put together a book of all the good stuff. Now you don't have to go to college.*

**The Proper Study of Man**  
James Fadiman, ed.  
1971; 481 pp.

Macmillan Company  
866 Third Ave.  
New York, N.Y. 10022

*From The Diary of Vaslav Nijinsky*

Everybody will say that Nijinsky has become insane. I do not care. I have already behaved like a madman at home. Everybody will think so, but I will not be put in an asylum, because I dance very well and give money to all those who ask me. People like an odd and peculiar man and they will leave me alone, calling me "mad clown." I like insane people, I know how to talk to them. My brother was in the lunatic asylum.

I was fond of him and he understood me. His friends there liked me too, I was then eighteen years old. I know the life of lunatics and understood the psychology of an insane man. I never contra them, therefore madmen like me.

Life is not sex – sex is not God, God is man, who fecundates only one woman, a man who gives children to one woman. I am twenty-nine years old. I love my wife spiritually, not for begetting children. I will have children if God wishes it. Kyra is an intelligent girl. I do not want her to be clever. I will prevent her from developing her intelligence. I like simple people but not stupidity, because I see no feeling in that. Intelligence stops people from developing. I feel God-and God feels me.

*Educational theory presumes that cognitive and intellectual and "social" development is about all that can or need be dealt with in the schools, and the schools act accordingly.*

*Gerald Heard (scarcely mentioning schools) investigates a deeper education, namely emotional human development both in history and in the individual. His effort is to recognize and honor the various stages of people's relation to their own energies, and recognize and honor the requirement of recurrent further growth, and recognize and assist the hard transitions from one stage to the next.*

*His notion spreads out like this:*

Historical stages (5 crises)	Personal stages (5 ordeals)
Conscious man	Birth trauma
Heroic, self-assertive man	Childhood (becoming paranoia)
Ascetic, self-accusing man	Adolescence (schizophrenia)
Humanistic, self-sufficient man	First maturity (manic depression)
Leptoid, post-individual man	Second maturity (involuntary melancholia)

*What emerges from all this is pretty radical education.*

Depending on where a person is hung up, you ritually bury him, or half drown him, or gas him, or burn him, or send electricity through him. Mr. Heard has done much of this to himself and speaks well of the effects. I believe it. Rites of passage are rare these days, and mostly fumbled when they occur. It would be nice to know what's going on and be able to get some help when spontaneous metamorphosis has you spinning.

*Says Heard, if we tend properly to all the transitions, we will enable old people to be useful and growing, as seeds.*  
Gerald Heard is 80. —SB

[Suggested by Peter Douthitt]

**The Five Ages of Man**  
Gerald Heard  
1963: 393 pp.

**\$8.50** postpaid

Briefly, then, this is the thesis of this book: man can

and he has done so with increasing understanding. Although at first this training was implicit in a rite that worked without being consciously comprehended and, next, it was esoteric and a mystery understood only by psychophysical pioneers, today it can become explicitly exoteric, rendered in contemporary terms and applied with scientific exactitude and as a therapeutic education. Such an education is the basis for both the person and a cosmic society. It can produce a constituent able to accept and fulfill his whole personal process and also be the conscious, willing, and developmental unit of a civilization that is creatively run by a common consent and coterminous with a nonviolent mankind.

### Skill

Ever since his "expulsion from paradise," man has been inclined to protest work as drudgery or as slavery, and to consider most fortunate those who seemingly can choose to work or not to work. The fact is that man *must* learn to work, as soon as his intelligence and his capacities are ready to be "put to work," so that his ego's powers may not atrophy.

The rudiments of *skill* add method to hope, will and purpose. Now what "works" in the fabric of one's thought and in cooperative encounters: a self-verification of lasting importance. All human environments, therefore, meet this stage with the offer of instruction and the opportunity to achieve. The child's *work* is the *work* of his achievements. All cultures have their logic and their "truth," which can be learned, by exercise, usage, and ritual. Where literacy is a common basis for all future speculation, the rite of grammar and the rite of spelling, in turn, form a compact demonstration of the workings of reality. *Work* *workship* is the child's first experience which comes from convincing experience: prepare in the child a future sense of *competency* without which there can be no "strong ego." Without it man feels inferior in his equipment, and in the process of his life he is missing sections of manageable reality with his growing capacities.

Erik Erikson, *The Roots of Virtue*



These guys, whoever they are, are all for making this a better place. They don't shout and they don't make funny. But they say a lot of good stuff for \$5/yr. What got me on to them was that I read somewhere that Manas was a kind of unofficial organ of the humanistic psychology bunch. I'm not sure this fully explains them, as they don't seem to follow any party line. They've got some heroes like Gandhi and Tolstoy, too; but they don't go on and on. They comment on whoever has grist for the mill (Plato, Paul Goodman, Peter S. Beagle, Christ knows who-ah). They've turned me on to a whole hell of a lot of really great stuff.

[Suggested and reviewed by  
Richard Welsh]

## Manas

**\$5** /yr (weekly)

from:  
Manas Publishing Company  
Box 32112  
El Sereno Station  
Los Angeles, CA 90032

If Buddhism were to contribute to the "Global Canon" its assumptions of "Mind Only," *karma*, and the Unity of Life, our ecological exertions within a chilling space-time continuum might gain some impetus from the emotion Einstein speaks of. But the *mahayana* has more to offer. Its last words affect man alone, as the recipient of self-consciousness, suggesting to him a peak definition of himself. For he is here sponsored as an advanced candidate for *prajna*, total Enlightenment through personal effort, in a world whose equilibriums, endlessly disturbed, are being as endlessly restored under a law of impartial justice.

But then comes the rider. Despite appearances, the effort boomerangs, the reward recedes, whenever *karuna*, compassion, is absent anywhere between the means and the end. Ruthless progress is, in fact, not progress at all.



The bigger logs, ablaze but not yet broken up by the fire, were arranged crosswise in the trench, above the bed of flame made by the pieces that had broken apart. The fire was bright and the charcoal was glowing. If the cattle-guard or corduroy walk was made, through the flames, or if the flames rose, the priest with the wands, who had sat before the fire while it was lit and brought to full conflagration, had now moved forward and was standing in the trench, with his wands raised in the air. It was staying sitting like this for a few moments, after which all was ready for the therapy. The first to walk the length of the trench was one of the younger men, followed by the priest, then the other men. The men had been brought near and lined up. Old people, the middle-aged, and youngsters—between twenty-five and one hundred persons went along the trench. The priest, with his wands raised, walked in the trench and deliberately stepped on some nice fat flames, smelled the hair burning on my legs but found the flames were cool. When I put on my socks again and walked to my right and left, there was an oven and so from a distance I could see the right and left sides of the trench. I was able to strain against the wands. The wands were not bent, but they were not normal and no longer hot. The next day I walked some nine or ten miles and the ankle was still OK. The skin of my feet had not been damaged.

A meteorologist friend of Jellinek's, caught in a thunderstorm on a Swiss peak, used the method. Having braced himself against the possibility of being struck, he was hit three times by lightning. But although his clothes were torn and his skin broken, because he was prepared he was neither stunned nor did he suffer anything but the surface abrasions.

The emergence of second maturity, the large class of healthy grandparents, can be understood and be availed of only if we see that this fifth phase is inevitable; that it is the essential requirement for the manning of a fifth category of mankind, the fifth age of man as a race and as a person.

•

Now, with old age at the upper end, Nature restores freedom of choice and permits, once again, that rightful irresponsibility to enquire and explore regardless of consequences. Being relieved of the armor of authority and the enforcement instruments of command, those in second maturity are once more at liberty to enquire rather than to guard, and to question rather than to reply.

Second maturity is a return to a regenerated outlook emotionally and intellectually, a resumption of generalized response. Hence, it can be the state in which it would be natural for the capacity of seership to be attained, to re-emerge. And, with that capacity, to regain a generalized affection, good will, and anxiety-free concern and vision into the nature of time that would explicate death by uniting the mind with eternal life.

The actual procedure of the water initiation would, then, involve first an immersion, naked and in a tank of circulating water kept at body temperature, and wherein the body would be irrigated exteriorly and interiorly. The eyes could see, through a glass view, the water-suffused body, and the light of the water would be projected into the brain in patterns given it by the use of a stroboscope. The ear should be vibrated by sound rhythms of a comparable frequency sent through the water, which is a better sound-carrying medium than air. In this manner, the subject would be able to see and hear the water, and, in ten minutes the water in the tank would be made to begin a pulsing, vortex movement. And against this whirlpool he would have to struggle until, at the end of the ten minutes, he would be able to rise out of the water, and, as he would, he should emerge into an altered state of consciousness.

## World Game Report Two

Play the Big Game. This is good introduction to basic technique. More World Game stuff on p. 28.

—SB

[Suggested by Timmi Bushbaum]

## World Game Report Two

from:  
Design Department  
Southern Illinois University  
Carbondale, Illinois 62901

### SIX SUB-SYSTEMS OF MAN'S EXTERNAL METABOLICS

#### Definitions

**Materials Conversion**— Sub-system whose function is to reduce complex or heterogeneous matter-energy into more simple or basic forms of matter.

**Tool Making**— Sub-system that takes pure or processed matter (from matter conversion) and makes it into more organized configurations that are to be utilized by all sub-systems (including tool making). Tool making outputs all tools and contact products (see definitions) but not services.

**Power Conversion**— Sub-system that transforms unusable matter-energy into energy utilizable by the entire technological system.

**Transportation**— Sub-system whose primary function is to deliver matter-energy forms and some types of information from sub-system outputs to desired inputs of the sub-systems. Transportation also performs storage functions for matter-energy and information temporarily not being utilized by the technological energy.

**Media-People**— Sub-system whose primary function is to accumulate, integrate, store and distribute information for all sub-systems. The effects of people occur primarily in this sub-system.

**Everything Else**— Those variables in universe over which man has no control (or over which man has relinquished control).

## Dymaxion Sky-Ocean World Map Kit

\$1.95 for the punch-out kit

from:  
Creative Education Society, Inc.  
515 North Front Street  
Monkato, Minnesota 56001

The shiny flat maps are \$4

from:  
Fuller Dymaxion Aircroft World  
Carbondale, Illinois 62901  
or WHOLE EARTH CATALOG

## Extinction

Of the innumerable topical board games that have come by lately, this is the first we've seen that is both an interesting game with some fresh—fresh dynamics and pretty good education. Suppose you're a nocturnal species with a high litter size of 10 and mobility of 20, you're already over-populated and in hazard of famine or pestilence; you breed in swamps and marshes and you have water pollution resistance (water pollution just eliminated your competition in the marshes); you have defense against swift predators, but one of your opponents is crafty and you think the other one is strong since he changed genes last turn; you spin the spinner and get—watch out—migrate and reproduce; what do you do? [I would migrate out of marshes and swamps and up next to the predators before reproducing. Then spread the new individuals into "unfavorable" environments, thus reducing my reproduction rate and keeping well buffered against environmental changes in my breeding grounds. Also I'd look for new genes.] If the game could include considerations of nutrition, energy cycles, and specialization, I'd be happier with it, but the makers encourage you to add your own rules to make this flexible game closer to the Big Game rules.

—SB  
Extinction: The Game of Ecology  
\$10.00 postpaid

from:  
Sinauer Associates, Inc.  
20 Second Street  
Stamford, Connecticut 06905



## FLASH

for immediate release



GOD-CREATING THE UNIVERSE

photo by Mrs. God

## Systems and Education

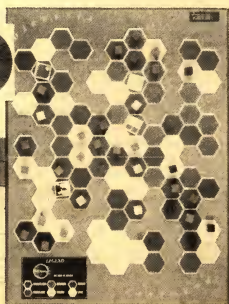
Author: John Pfeiffer  
Title: New Look at Education: Systems Analysis in our Schools and Colleges  
Publisher: The Odyssey Press, N.Y.  
Cost: \$1.00—Paper  
Total No. of Pages: 162

Books on systems are usually either loaded with statistical equations so complex that even advanced graduate students can't figure out what the author was saying, or they are specific to exotic subjects, like the hormone system of the species *Rattus Rattus*. Admittedly, such books are important to a very overspecialized scientific few, but for me (a layman) they take on the average of about one year to translate into everyday "thing language" to be useful. However, John Pfeiffer DID IT!!! He wrote a small book, with no excess verbiage or professional rhetoric, which describes simultaneously the fascinating history, slow development, and almost haphazard application of systems analysis—all over the recent past thirty years. This in turn, is blended into a concise description of the basic elements of "the systems approach," with numerous "tidbits" example for testimony to the naturalness of being and living with systems.

One last comment: There is fast approaching the long shadow of both individuals, and our entire society, beginning the mad scramble to discover and meet the most important priorities for personal and planetary survival. Which comes first? (Circle One!!!) Racism? Ecology? Cosmic Consciousness? Joy? Education? Poverty? Love? Population? Self-Awareness? Tools? Gods? Birds? Books? Man! Each group scrambles for identity and social awareness of its cause, and it is eaten up by the mass media. And each person does two year stints of this or that, and not having "made it," put on another cause for another two years (with appropriate clothes).

But what if there is no "first cause (or first sin)? What then? Where to begin!!!! "begin at the beginning, of course!" What everything. And then decide what to do and what to believe in. Pfeiffer helps man begin, by inviting him to take a look at systems, and then to make conscious decisions, with a renewed knowledge that whatever one does is interrelated IN SPECIFIC WAYS to EVERYTHING THAT IS.

Paul R. Podaska  
Amherst, Mass.



## Education Automation

In this book Fuller is mainly concerned with educational access: designing ready access to comprehensive and replicable information and designing mobility as the basis of education.

—SB

Education Automation  
R. Buckminster Fuller  
1962, 88 pp.

Temporarily out of print, new edition by another publisher in the Fall.

I would say, then, that you are faced with a future in which education is going to be number one amongst the great world industries, within which will flourish an educational machine technology that will provide tools for the individually selected and articulated two-way TV and an intercontinentally networked, documentary on-line system, operative over any home two-way TV set.

We also find that generally speaking the geographically larger the physical task to be done, the duller the conceptual brain that is brought to bear upon the integration of the scientific discoveries and their practically realized applications. Finally, we get to international affairs, and you know what's happening today.

I would counsel you to your deliberation regarding getting campuses ready now to get general comprehensive environmental controls that are suitable to all-purposes like a circus. A circus is a transformable environment.

You don't need a detailed drawing; we do not make that kind of communication to a craftsman any more; but all the schools go on teaching that we do. The data no longer goes to the craftsman; it goes to the tools. The idea of drafting measured details is going to become obsolete. We don't want many measured detail drafting. What we want is the man who gets the fundamental concept, the information significance and can do some comprehensive thinking regarding that information. He will put the data into the information machines, and it will be processed by automation into physical realization of his effective thinking. We don't need many of the myriad of "things" we have had in school.



ATTENTION

Attention drove the other animal outside of space and time. It drove the work along like floating fear of gravity. It lifted the work above its own resistance and its friction, like running naked after wearing heavy boots and suits of clothes. It set the posts and stamped them firm. It ran the nails unerringly, and ran the one-by-ones across the front and past the dog-leg by the stump, and pointed then along the final side to link up with the other corner of the barn. It closed the fence. I held them to their task till they had cut a door in the barnwall for the pigs to come out through, and smell out their new universe.

Reluctant, then curious, the pigs came out, cautious, one at a time, then gathered in committee in the corner to inspect D.R.'s and Leonard's work.

They approved. Grunting, muttering little squeals, they scattered across this unexpected ground, and one pished on it. D.R. and Leonard laughed at that, and D.R. listened carefully to their laugh. He watched closely as Leonard fed the dogs, and closed them back in their stall for the night.

On their way to the house for supper he paid attention when Leonard said: next winter when we have some good sausage for breakfast I'll remember this day, David.

That thought thrilled D.R. and he paid attention to the thrill. He paid attention to Rosie pouring turpentine in the wounds from his day's labor. He noticed how her hands felt on his, he paid attention to her presence, cold, and to the food she had prepared.

Roast beef, boiled potatoes, beans, cold stew heavy with mayonnaise, rhubarb, cornbread, and milk, and then banana pudding for dessert. D.R. noticed every bite he took, he paid attention to his mouth chewing, he tasted every flavor that was there, and all their exotic mixtures in his mouth. He paid attention to the coffee, and when they had finished supper he experienced himself getting up and saying he guessed he better get on up the hill and get his animals fed — and wetted — before it got dark.

He thanked Rosie for the supper, and Leonard thanked D.R. for the work. D.R. paid attention to Leonard's face and voice when he said it. Leonard offered to pay D.R. but D.R. said no. I owe you that much.

Leonard said, Well, when I get a little time I'll come up and give you a hand.

I'll be reaching it, D.R. said. Come down and go to the wood with us tomorrow if you want to, David, said Rosie.

D.R. said he didn't think he would, but he thanked her for inviting him. We'll see you later then, said Leonard. Yeah, said D.R. Good night, you all.

And he left then. He got home with just enough daylight left to do his chores.



## Conscientious Guide to Drug Abuse

I'd call this **THE BOOK** to have around if you or anyone in your family is doing drugs. It has kind, quick, accurate advice.

—SB

### Conscientious Guide to Drug Abuse

Py Pawlak  
1970; 32 pp.  
\$0.75

from:  
Do It Now Foundation  
P.O. Box 3873  
Hollywood, Ca. 90028  
or WHOLE EARTH CATALOG  
quantity orders for resale  
from:  
Meadow Publications  
Do It Now  
4514 Fountain Avenue  
Los Angeles, Ca. 90029

### BUM TRIPS

One of the prime factors inherent in acid is the possibility of incurring a bum trip. This possibility has kept many from tripping. Over the past several years in particular, it has been nearly impossible to obtain pure acid. Most stuff is mafia-organized and cut heavily with speed and/or strychnine (rat poison). Under clinical circumstances, bum trips rarely occur unless provoked. But *when acid contains strychnine, speed or other opiates, the possibility of a bummer increases tremendously.*

The best advice to give straight or inexperienced people about dealing with bum trips is Don't panic. Be gentle, kind, and smile a lot. If necessary to avert a traumatic chain of events, divert the person with pleasant music or a change of atmosphere (like turning off or on the lights). Most bum trips could have been prevented if the right information was only known by the person's friends ahead of time.

Clinically, Thorazine (a strong tranquilizer) has often been used to relieve the effects of a bum trip. Thorazine works by tranquilizing the system and relieving the built-up tension. Lately the use of Nicotamide has become popular in relieving bummers; this substance, buffered by Niacin (vitamin B3, chemically changes LSD to another lysergic substance that has no effect on the body or mind).

It seems unlikely that the availability or legal status of LSD will be changed significantly in the next few years. Slowly, as the practical uses are realized, there may be loosening of restrictions regarding research with the drug. At best, acid may soon be recognized as a legitimate, useful chemical to be given only under careful supervision...

**SPEED KILLS.** It's true. People have been taking speed ever since it was developed before World War II. How many people have you ever met who were taking speed for as much as 10 years? 6 years? A few 3 and 4 year veterans are around, but not in very good shape.

Even smack addicts have a longer life span.

**Speed Kills.** The reason most kids don't notice it is because they have young, healthy bodies that can take a lot of stress and strain before they finally give in. Speed activates the entire body and forces it to race at higher rates of speed for long periods of time. The larger the dose, the greater the strain. The smaller the dose, the smaller the strain. This is why Speed can be legitimately prescribed in minute doses (in diet pills, pep pills, etc.), for several months without apparent harm. At often speeds, great strain on the entire circulatory system and often causes aneurism (ballooning in the arteries or vessels).

**Appetite is non-existent.** Food is a big drag and it is almost impossible to eat solids. Sleep is also very difficult, if not impossible, during the run. Both lack of appetite and inability to sleep are side effects of speed; the body becomes very wasted when no nourishment or chance for sleep-rejuvenation takes place.

The liver and kidneys, which filter impurities from the system, are forced to over-work. This creates a situation which like operating a complex water pump and filter system without water. It just burns up.

Because of the massive stimulation of the nervous system by Amphetamines and because appetite and sleep patterns are disturbed, an eventual state of toxic psychosis often occurs. This is usually characterized by hallucinations, tremendous panic or fear reactions, with added waves of dependency and depression. During this period it is extremely tempting to avoid the hard comedown by shooting up again and driving more speed. By the third or fourth day of continuous use the chemical starts taking over, everything seems unimportant.

Speed actually begins years of aging and deterioration to be squeezed into a few weeks or months.

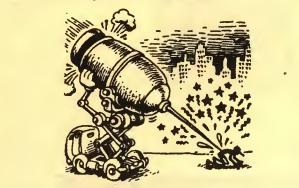
In addition, Speed freaks often suffer an acute state of paranoia. Friends who used to be taken imagined that people were staring at them through windows and whenever they weren't looking. The natural uneasiness-nervousness that comes from Speed is intensified by fear of getting caught or busted.

Kids who are on Speed make a big mistake that is common to this and other hard drug users. The more Speed they take, the more their heads get messed up anyway, and take more speed to alleviate the anxiety and mental confusion. Of course, the end result is only increased confusion, anxiety, and decreased mental capacities. Another proven effect of Speed is eventual damage to brain functions; people who once had full control of the English language find themselves unable to remember proper words, and even have difficulty in speaking. Not all hard drugs will do this—But Speed will.

## IN CASE OF SPEED OVERDOSE

Hospitalization is almost never necessary. The person will be very wired at first, eventually feeling off after several hours. Speed may be very dangerous for those with heart defects.

Besides long-term dangers of Speed itself, there are several dangers associated with using needles for the injection of the drug. The most common of these, *AIDS*, will be discussed here:



### HEPATITIS

The common form of hepatitis is "viral hepatitis", caused by an unseen needle or contamination of the drug being injected. There is nausea, loss of appetite, possible vomiting, and usually a feeling of being ill similar to the flu, but on a heavier scale. Following this, jaundice (yellowing of the skin and eyes, usually occurs). After a period of weeks and months the patient usually feels fairly well. But the extensive cut and good care involved with such a rehabilitation are usually too much for the average speed addict to afford.

Research that is being done suggests that the average case of hepatitis among speed users is of a more chronic type. Weeks and even months after recovery from hepatitis, blood tests from the liver show high abnormality. It may be that a more chronic disease state is still occurring; cirrhosis of the liver has been suggested by one researcher. Cirrhosis also occurs in some alcoholics; normal liver tissue dies or is choked by other, non-functioning tissue...

### ALCOHOL

**Classification:** Depressant.

**Overdose potential:** Possible, when taken in sufficient amounts or mixed with Barbiturates.

**Physical addiction:** Yes.

**Common methods of consumption:** Ingested, liquid form.

**Notes:**

Alcohol is a depressant; in chemistry and pharmacology, it resembles chloral hydrate and paraldehyde.

The pitfalls are many and varied. It is among the most dangerous drugs in existence, ranking in the category of Speed, Barbiturates and hard narcotics. An estimated 6 to 7 million Americans are chronic alcoholics, or one out of 30.

The American Pharmacological Association, in their pamphlet on "Drug Abuse Education," credits alcohol with causing "acute and chronic intoxication, habituation, physical dependence and addiction. Withdrawal symptoms (delirium tremens) result when alcohol is discontinued."

**Medical Uses:** As mentioned earlier, alcohol and hashish were once used as an anesthetic during open surgery with reasonable success. Before either was widely available, alcohol was sometimes used medicinally. (Remember the Old West doctors in the movies?)

Alcohol is extremely dangerous when taken with most Barbiturates because it heightens action of the pills to such that it can create an overdose.

## Magically Aborting Unwelcome Trips

About acid bummers &c.:

Assume that human beings are energy devices. Assume that your right hand is a positive pole, your left a negative (vice versa if you're left-handed). Assume that headaches, bummers & the like are symptoms of minor disturbances in energy flow. (These assumptions are not necessarily true. Just a useful metaphor, a convenient way to think, that works.)

To cure a headache, place your positive hand at the base of the sufferer's skull and your negative hand on his forehead. Imagine there is a current flowing through his head from your positive hand to your negative hand, and that this current causes the flow in the sufferer's head to straighten out & flow right, thus terminating his headache. This takes from 5 to 30 seconds.

This works, whether the operator believes it will or not, and regardless of what the sufferer believes. (Beautiful crisis of "My God! It's GONE!" are commonplace.) The only requirement is the act of imagination. If you imagine it'll work, it works.

I've used the same process on about 50 acid bummers so far, with 100% success. Variations can be invented freely to suit various circumstances.

This is traditionally called "Magnetic Healing." I prefer to call it & related phenomena "Energy Transactions." Very useful in Magic & other mystical yogas.

Invent your own techniques. Please tell me what happens.

Reief is probably symptomatic, but saves on aspirin & similar crap.

Chester Anderson  
Los Angeles, CA

First Aid



## Chemically Aborting Unwelcome Trips

The following is excerpted from a pamphlet by *Naturalism, Inc.*, Box 8318, Chicago, Illinois. L.S.D. Rescue in Chicago is doing a phenomenal service by researching drugs by which people who have had a bad trip are cooled down. *Nowhere else have I seen detailed reviews of the various drugs available in the street ("THUNDER. Grey and black speckled. The Dope is saturated on strychnine pellets. It's a bad trip. BLACK DOMES. Double-domed - dynamite - good tabs."*

—SB

### ABORTIVE MEASURES:

**Stimulants:** Give Ascorbic Acid (vitamin C) 3-6 gr; this absorbs Amphetamine in the bloodstream. Also 7 tbs. Accent (most tenderizer) or 5 gr. Glutamic acid to relax muscles. Sedatives (Barbiturates) and tranquilizers may be used to control excess stimulants.

**Depressants:** (Barbiturates, alcohol, Tranquilizers, and narcotics). Keep persons awake by physical shaking and/or hot & cold showers. Give Caffeine, or coffee, or amphetamine if available. Maintain vital signs, i.e., pulse, blood pressure, respiration. (Opoids) Heroin may be absorbed with Lorfan (3mg-2mg i.v. or subcut.) or Nalline.

**Cannabis** (Marijuana, Hash, T.H.C.) Raise blood sugar by giving honey, sugar water, maple syrup. 4-10 oz. sugar water. This causes hyperglycemia which sedates the person. Mild tranquilizers may be used to relax persons in extreme situations. "Accent" is also effective.

**Serotonin** type drugs—(LSD, DMT, Psilocybin) Give Niacin (B3) 1 gr./50 lbs. body weight to stop hallucinations within 40 min. Prescription abortants include: Valium 5-25mg, Vistaril 25-200 mg, Librium 10-100 mg, Seconal 100-100 mg, Carbitol 3/4-3 gr. Also "Accent" 7 tabs., is effective.

**Adrenalin** (Belladonna, scopolamine) Treat symptoms—give fluids to counteract dehydration. Treat temperature often and bring down all fever over 104 degrees with alcohol rubs. Watch the person until the drug has worn off. In case of severe crisis (cholinergic) give physostigmine salicylate I.M. or orally 2-4mg.

**Miscellaneous:** (Glue) Restore consciousness if necessary. This usually occurs when fresh air is supplied to the person. Artificial respiration may be necessary. If person is conscious, have him inhale some alcohol to break down the glue.

**Darvon:** Treat symptoms; induce vomiting; if person convulses and respiration is depressed, give nalorphine and/or levallorphan. DO NOT GIVE AMPHETAMINE OR CAFFEINE as these will cause convulsions.

**Peace Acid:** Treat symptoms. Give 5g Glutamic acid to help person relax.

**NOTES:** Situations in which a persons life appears to be threatened are handled by a doctor or hospital. Emergency wards are much better equipped to maintain vital functions, i.e., heart, heat, and respiration, and have technical facilities more efficient than those found in the home stomach pumping and analysis of drug while most drug problems can be handled by empathetic and assuring trained friends—counselors, problems such as toxic drug overdose and poisoning may require professional medical care. Always when possible/inform the victim when you feel that hospital attention is vital.



First Aid

# Psychedic Guide to the Preparation of the Eucharist

This is a thoroughly unusual as well as an unusually thorough collection of details concerning the preparation of a number of hallucinogenic substances. There are an initial few pages that editorialize on the legal, ethical aspects of psychedic drug usage (and some argument might be taken with the proposed dose schedules) but the bulk of the book is found in the detailed recipes and techniques that constitute the bulk of the book. There is provided the do-it-yourself details for everything from organic and inorganic synthetic systems.

On the botanical side of things, a number of comments are given concerning the growing of marijuana and its conversion to hashish or red oil. Far more unusual and interesting however is the procedure for the setting up of appropriate fungal culture media for the surface growth of *Puccinia muscivora* (for the production of the psychoactive clavine alkaloids) and systems for the production of the lysergic acid precursor to LSD. Also along the nature line, the isolation of mesaline and other alkaloids from *Peyote* is described in some sufficiently follow the procedures, and such a person would certainly have access to the original literature. The synthesis of mesalines, however, is described in adequate detail and several alternate processes are offered. The various indoles (psilocin, DMT and DET) are covered in good detail. Special notes must be made of the section on LSD. The conversion of lysergic acid into LSD, and the final purification of the product, is given in exquisite detail. It is doubtful that such a thoroughly exacting account has ever previously been published.

A number of references are made to the scientific literature that will certainly help in filling out the missing fine points. Directions are at hand for the construction of a number of laboratory utensils, but these fall short of sufficiency. The suggested modification of a refrigerator will probably not lead to a vacuum pump adequate for the described preparation of red oil from crude marijuana extract. Finally there are warnings and admonitions advanced to the reader such as the naming of chemicals that are on the federal watchlist. Of course, these chemicals to be avoided are to a large measure those that are required for the successful preparation of the chemicals described in the book. This paradox is recognized by the editor, who states:

"It must be clearly pointed out that many things throughout this manual have recently become unlawful and no one should ever break the law. Therefore, anyone attempting to pursue the course outlined herein (in countries where prohibited) must be willing to shoulder the burden of perjury which will fall upon him. Since the religious user and chemist are not necessarily not the same person, the religious user, if he is sincerely happy that no one will be forced to murder himself for his incorrect use of this guidebook."

All in all this is a charming book, pleasantly illustrated, that should serve at least as an engaging conversation piece in most households.

## Psychedic Guide to Preparation of the Eucharist

Robert E. Brown  
1968, 80, 80p

\$4.95 postpaid

from:  
Linga Shrinia Incense Co.  
Box 4374  
Austin, Texas 78751

or WHOLE EARTH CATALOG

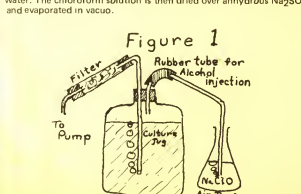
## Preparation 2

### Step 1—Use Yellow Light

5.36 g of 4-lysergic acid are suspended in 125 ml of acetonitrile and the suspension cooled to about -20 degrees C in a bath of acetone cooled with dry ice. The suspension is added to a 200 ml solution of 8.82 g of trifluoroacetic anhydride in 75 ml of acetonitrile. The mixture is allowed to stand at -20 degrees for about 1 1/2 hours during which the solvent is removed and the acetone portion is discarded. The mixture is converted to the mixed anhydride of lysergic and trifluoroacetic acids. The mixed anhydride can be separated in the form of an oil by evaporating the solvent in vacuo at a temperature below about 0 degrees. Everything must be kept anhydrous.

### Step 11—Use Red Light

The solution of mixed anhydrides in acetonitrile from Step 1 is added to 150 ml of acetonitrile containing 7.6 g of diethylamine. The mixture is stirred at room temperature for about 2 hours. The acetonitrile is evaporated in vacuo, leaving a residue of LSD-25 plus other impurities. The residue is dissolved in 150 ml of chloroform and 20 ml of ice water. The chloroform layer is removed and the acetone portion is discarded and combined and in turn, washed with four 50 ml portions of ice-cold water. The chloroform solution is then dried over anhydrous Na2SO4 and evaporated in vacuo.



More dope on p. 210 and p. 62.

## Psychedic Review

The Psychedic Review is back. It had stopped publication for over a year or so—like its godfather, *Leary*, it is alive and well in a new location. Once again it arises to fill the gap between the bio-chemical abstracts and the yellow journalism treatments of psychedic experience.

The review has been the place to look if you were seriously interested in drug usage, drug effects, drug theories, and drug-oriented art and poetry. The word psychedic, once limited to drug-induced experience, now has expanded to include other altered states. The review has expanded as well. The latest issue has articles on the world of spirits, the use of pot in curing alcoholism, LSD as preparation for death, and a multi-faceted view of *Leary*. The present position. *Leary*, *Baba Ram Dass*, and *Leary's* lawyer contribute ideas and reflections.

The Psychedic Review is the only journal to treat the literary, the scientific, and the spiritual aspects of psychedic experience equally well. Its return is good news.

(Reviewed by James A. Fadiman)

The Psychedic Review from:  
Robert Mogis, ed. The Psychedic Review  
4034 20th Street  
San Francisco, California 94114  
\$7.50/yr (quarterly)

By an extraordinary series of circumstances a confirmation appears to have been found for one of man's oldest and most unusual doctrines—that of man's life depends on his relationship to a hierarchy of spirits. Out of my professional role as a clinical psychologist and a personal interest, I set out to describe as faithfully as possible mental patients' experiences of hallucinations. A discovery four years ago helped me to get a relatively rich and constant picture of the patients' experience. Though I noticed similarities with Swedenborg's description of the relationships of man to spirits it was only three years after all the major findings on hallucination had been made that the striking similarity between what Twentieth-

Hemp Hard work, but we must get there too. Also we must stop being such heads and learn the art of the follow-through. "Where were you? Why weren't you there? Why were you so late? Why didn't you finish it? Why don't you remember?" Hemp is a lot, not a separate universe.

AG=non-toxic

## Marijuana Review

Good current information on pot, especially towards its legalization. I don't have a copy to show you.

Marijuana Review from:  
Michael Aldrich, ed. Amorphia  
Box 744  
Mill Valley, CA 94941  
\$2/yr

## STASH

Means Students Association for the Study of Hallucinogens. Very thorough, sometimes academic, information on drugs.

STASH Press  
538 Pleasant St.  
Blairstown, Wisconsin 53611

When the British government was investigating the effects of marijuana on the Indian population in the 1890's, they conducted a series of biological experiments with monkeys. One monkey was trained to smoke a combination of marijuana and *Datura* and was allowed to continue this practice for many months. The monkey was then sacrificed and the autopsy revealed abnormally soft cerebral matter, while the other parts of the brain were in various stages of decomposition. None of these effects were seen in those monkeys trained to smoke only marijuana, and the doctors concluded that *Datura*, when used over a prolonged period of time, can directly cause organic brain damage.

It seems a sad commentary on the state of the present "psychedic subculture" that the very practices of the establishment which are criticized as hypocritical in their attitude toward the use of "contraculture." Unethical and inexperienced buyers are being led to believe that they haven't been "stoned" with Dealer X's acid, when they've never been "stoned." A mind washed in one dealer's mesaline is purported to be "whiter than white" while the head of the unfortunate user of Brand X seems to display the same old discouraging collar stain. "New" and "improved" preparations are being hawked with all the fervor of the quack who uses an Anacin® on the tube.

Some of underground chemists who have discovered that the *Life* magazine claim that anyone who has received a C in high school chemistry can make good, pure LSD is a myth, have compensated for speaking their consciences with everything from methamphetamines to belladonna alkaloids. The powerful financial incentives associated with the manufacture and sale of illicit psychodelics have, unfortunately, attracted the same type of unscrupulous merchandisers who have grown rich convincing us to buy cars that are unsafe, drink drinks that cause cancer and a frightening variety of status symbols that are of no human use. As a result, many of the "freaks" who have gotten involved with the psychedic scene in the past few years have never been able to get on. It is not difficult to comprehend the increasing cynicism of the "flower children" when they are manipulated and possibly even poisoned by people taking advantage of their implicit trust in others.

# PSYCHEDELIC REVIEW 1971

Century patients describe and Swedenborg's Eighteenth-Century accounts become apparent to me. I then collected as many details as possible of his descriptions. I found that Swedenborg's system not only is an almost perfect fit with patients' experiences, but even more impressively, accounts for otherwise quite puzzling aspects of hallucinations. I will first describe how I worked and my findings, and then relate this to Swedenborg's work.

It would appear that for selected alcoholics the substitution of smoked cannabis (or alcohol) may be of marked rehabilitative value. The drug effect of cannabis, as compared with alcohol, while having a sense of euphoria and detachment in common, lacks any other similarity except the intent for which it is taken. Excessive alcohol use produces a predictable weakening and dissolution of various superego and ego functions, whereas cannabis does not seem to have such effects, providing, if anything, an increase in ego strength. Because cannabis does not facilitate ego alien behavior as with alcoholic excess, a great benefit of guilt if removed, thus freeing the individual for more constructive pursuits.

DOSSAGE BY WEIGHT

The fact that cannabis did not produce symptoms of irritability upon withdrawal, nor effects on the gastrointestinal tract, as compared with alcohol, was a significant finding. Since he is not physically sick any more, he is thus free to begin realization with the expansion of his consciousness to perceive the subtleties of the world beyond his needs for immediate gratification or succor. Certainly cannabis is not a panacea, but it warrants further clinical trial in selected cases of alcoholism.

Drug Light High Experienced Normal First Maximum

User	Psychedic	Maximum safe dose
LSD 20-50 100-200 300 400 800-1000 1000-3000		
THC 1 mg 2.5 mg 5 mg 10 mg 20 mg		
DMT 5-10 20-30 40 50-60 100 mg		
psilocybin 5-10 mg 20-30 mg 40 mg 50-60 mg 100 mg		
mesocaine 5-10 mg 20-30 mg 40 mg 50-60 mg 100 mg		

The very light doses only give a feeling of well-being and seldom cause much hallucination. The experienced user can achieve the psychedic effect with less of a dose, gradually increasing the reality. A person trying to experience the full psychedic effect for the first time needs to be disconnected much more fully, therefore the larger dose. The largest doses cause a complete break with reality that few can handle peacefully. The slight toxic side effects are not a major factor in considering the dosage because the hallucinogenic effects are so much more overwhelming at those high doses that other factors are minimized. The crude natural substances are not listed here because the amount of drug available does not follow any reliable weight percentage as the quality of these substances is not at all constant.

Walking, bottle jolting, downhill. It's Sunday morning now and D.R. is on his way to explore the old abandoned mine shaft he freaked out in his first day back at Trac Farm. It's been on his mind for several days to do it, to crawl back in with a light of some kind and get a real look at that place. He has passed the ruins of the temple many times but he has been in the zone only once until this morning he has been chosen on some specific errand or other. There has always been to stop and look around.

But it's Sunday now, his day of rest and leisure. D.R. slept till almost ten, fixed himself some eggs and fired a slice of green tomato for breakfast, and now at about the hour the other people of the community are gathering for Sunday worship at the church, D.R. has set out from the house with this very special destination in mind.

There were other things in D.R.'s mind too as he jolted down the hill, but they were being crowded out by the chaos of broken images he wasn't paying them attention. Pictures of the day before with Leonard, working, were vivid, and entirely pleasant to see. Leonard wiping sweat off his face, and grinning; the way the long one-by-aixes formed with the upright posts; and then an image of the finished pen itself, a space enclosed; all of those were pleasant scenes to see. But they flashed and flickered and jumped around so fast D.R. couldn't hold to any single one long enough to bring it into focus.

Shots from further in the past than yesterday were mixed in too. He caught a glimpse of himself walking out of Trac Farm Sunday morning, a child among a group of people on their way to church on Sunday morning.

And then he saw Estelle lying on her back on that big rock where they'd made love the night before. He remembered her face, the way he heard the sound that cars make when they pass real fast, that sudden whooshing of the wind, and he caught a glimpse of cactus by the roadside on some desert he'd travelled in a car.

Dope Learning

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## The Hallucinogens

You wouldn't get out onto the freeway if you didn't know how to drive, and you damn well shouldn't go playing "fast me," and "drink me" unless you know what you're about. He doesn't know what he's doing, and he's not going to write the whole story to date. Hoffer and Osmond know more about this field than anyone else in the world, and their aim is to investigate it further. Osmond is one of the unsung heroes of the world, and he's got a lot to say about the nature of human nature. He's a leading researcher into schizophrenia, the coiner of the word "psychedic," the doctor who gave Huxley his mescaline, and is into a hundred other things. He's got a lot to say about the Jungian personality types. There are at least a few pages on every hallucination you've ever heard of, and on a lot you haven't; e.g., the "dream fish" *kyphosus luscus*, and the plants the doctor used to make his mescaline. He's got a lot to say about why it became, among themselves, illegal. When previous experimenters have used themselves as guinea-pigs, their diaries are reprinted, e.g., Mason's trips with pilocyba and LSD. He's got a lot to say about how to make a good self; and he is a very patient, understanding and aware guinea-pig indeed. For people who remember their college chemistry, he's got a lot of diagrams and more, for people who don't, he's got a lot of more diagrams and more. You see the way. This is a source book of knowledge, but by the by Osmond has two main observations of a philosophical nature. One is that the world is not what it seems to be from the beginning, and has been finding them, and 2) you don't get something for nothing. You can believe this you can't; has smoked with the best of them, and popped this into his mouth that haven't been tried in a few centuries.

*Warning: not reading this book may be injurious to your health.*

*Suggested and reviewed by Stephan Chodorov*

## Psychedelics

*A fine collection of the best papers by the man who coined the word psychedelic. Some good research got done before the Federal ban.*

—SB

## Psychedelics

Bernard Aeronson, Humphray Osmond, eds.  
1970; 512 pp.

**\$2.45** postpaid

from:  
Doubleday & Company, Inc.  
501 Franklin Avenue  
Garden City, N.Y. 11530

or WHOLE EARTH CATALOG

Once out of the water, I started climbing the mountain on a sacred pilgrimage. I stopped to examine small flowers and brightly colored rocks. I picked the flowers, putting them in my hair. The world shone with the joy of existence.

Again on level ground, I ran along, feeling Indian things. With virtually no plant growth in sight, I was hacking my way through jungles. I saw visions of snake gods, and received stories to take to my people. When I looked down to the oasis below, my friends, the others there, the wind caressing the water – all poignantly symbolized the human condition. Everybody should have a chance to see this vast panorama of man's existence on earth. To see the tides of nature, as I did then, seems an overwhelmingly marvelous thing in itself.

Peter Stafford

shortly after they saw yellow oxen left for many centuries, twenty minutes or so, but it could have been many centuries, stayed behind with the Indians, and I became part of the worshipping generation on generation generation on generation. I had hunted the buffalo. They had hunted the buffalo. The falcons. They were of one piece. They were the buffalo. Their lives were part of those shaggy lumbering herd beasts whose myriads roamed across the prairie, their hooves clattering and their manes almost equally scarce, sound often conveyed as much as sight. So the Indians call up their past with song, with drum, and with rattles, and with the buffalo. The buffalo. The buffalo. The buffalo. The changing images. Because we cannot hear as they do, the drumming and rattling seem endlessly repetitive to us. The drumming is the buffalo. The buffalo. The buffalo. The buffalo. The buffalo. The pawing and thudding of buffalo hooves crescendoing in thunder. It was the gentle rumpling of dust falling or the soft plip of a cat's paw. The buffalo. The buffalo. The buffalo. The buffalo. The buffalo. The endless sifting of wind, catching at scrub and grass as it passed. It was the hissing of an arrow as it leaves the bow or snakes through the air. The buffalo. The buffalo. The buffalo. The buffalo. The buffalo. The creak of a hide tape as the bilizard twists and whirls around. The drumming was life and death, fear and hope, and the buffalo. The buffalo. The buffalo. The buffalo. Yet it was also the first fluttering of a child inside its mother. As he sang, a young man wupt, and Frank Tunes Gun said, "Sh'd your eyes."

When my friends returned, I felt that the Indians and I were one and that, for a little time, or more accurately, a different sort of time, I was of their world rather than that of my colleagues, their conquerors. It was not simply that I realized they had a point of view I could respect, but that I felt in my bones as they felt in theirs. Looking back, I do not believe that this was an illusion, for I continued to be much more aware of their way of looking at things. But how could one prove such an opinion — without fine instru-

—Humphrey Osmond

## The Hallucinogens

A. Hoffer and H. Osmond  
1967; 626 pp.

**\$25.00** postpaid

from:  
Academic Press  
111 Fifth Avenue  
New York, N. Y. 10003  
or WHOLE EARTH CATALOG

Perhaps nutmeg pastry is popular because of the myristicin it contains. A feeling of well-being, following the ingestion of these cakes, might easily lead to a conditioned reaction to this pastry. In the same way it is likely that adrenoxin is used by surgeons because of the feeling of well-being it induces in their patients, and not because it is a valuable hemostatic agent (Hoffer and Osmond, 1960). The euphoric or relaxant properties of nutmeg and of myristicin should be examined carefully. Too little attempt has been made by modern man to discover safe plant antitension and euphoric remedies.

There is a difference between LSD and other hallucinogenic compounds. LSD seems in small doses to act as a stimulant not unlike amphetamines, in larger doses it seems to possess a depressant effect. Other hallucinogenic compounds tend to have depressant effects at all the dose levels.

We had, as we later learned, merely hit upon a solution to alcoholism which the Native American Church of North America, or its antecedent groups, had used long before. According to Slotkin (1956) the Indians believed peyote took away the desire for strong drink and claimed that hundreds of drunkards had been "dragged from their downward way." The small band of Indians in Saskatchewan who allowed us to observe their ceremonies one night, explained that their religion based upon God and the use of peyote to reach the Indian's innermost principles: (a) every member must be a good man, (b) he must educate himself, and (c) he must not drink. Thus we can only conclude that the peyote religion is the chief variable. Several Indians related to us how they had achieved sobriety only after this church.

Mr. Russell held the black drum passed to him. He sucked a little fat from it, tasted the hide, and smoothed it with a carapace. "You have only seen three last night – the leader, the drummer, and the shaman. Now you will see the fourth. Thank God we have lived to see another day. We represent our lives. We don't imitate anything; we have it in us. We are the only ones who have brought this life into this world." The Mother stepped into the tape through the door flap, enounced by the shrilling of the eagle-bone whistle. The fire was low, but some wisps of smoke rising from it seemed to surround her. She held a red blanket around her shoulders, a blue blanket around her waist. The Mother stepped forward and was greeted by a song of welcome with voices, drum, and rattle. With the singing, she became supple and other, mother, prairie, grass, and eagle. The Mother stepped forward and was greeted by a song, beating was not fearful or sleep inducing. It was the female pulsing of sex, passion, generation, and death, song without guilt and without fear. The Mother stepped forward and was greeted by a song, butending. She stood behind all the men – drum, drum, Father tender,

Frank addressed her in the highest falsetto, a tearing, almost noiseless scream, the cry of the tiniest baby or of an old man breathing his last. It was unbearable. The mother could have been any age — maid, mother, or crone, from sixteen to a hundred sixteen.

"You have been good to us while we were here. You worked hard and made this possible. God knows we worship Him. God knows we respect the mothers of our children."

The happy, oceanic feeling so often experienced by normal subjects was also evident among preterminal patients. It could be noted up to twelve days following the administration of LSD.<sup>1</sup> A certain change in philosophic and religious approach to dying took place that is not reflected in the numerical data. The patients' religious beliefs, as well as in post-mortem contemplation of death in preterminal patients, as well as in normal, consists of fear of the loss of control of internal functions and environmental influences. It is self-evident that control can be achieved only to a very limited degree, but this is not a crisis. The crisis is the loss of control of internal functions and external events, goes a fantasy-feeling of power to shape one's fate and an adult elaboration of the infantile feeling of omnipotence and omniscience. The feeling of imminent death obviously deals a heavy blow to this fantasy.

During and after LSD administration, acceptance and surrender to the inevitable loss of control were noted, and this control is anxiously maintained and fought for in non-drugged patients. LSD administration apparently eases the blow that impending death deals to the fantasy of infant omnipotence, but not necessarily by augmenting the hostile process, but by relieving the mental apparatus of the compelling need to maintain the infantile fantasy. Parallel to the general improvement in the patient's feelings, mood, and conflict situation, sleep patterns improved for approximately twelve to fourteen days.

The results of this study seem to indicate that LSD is not only capable of improving the lot of premenstrual patients by making them more responsive to their environment and family, but it also enhances their ability to appreciate the subtle and aesthetic nuances of experience. This increased delicate sensitivity is as marked as the usual emotional lability of the premenstrual patient. However, here, however, this imagery not only gives aesthetic satisfaction, but creates a new will to live and a zest for experience that, against a background of dismal darkness and preoccupying fear, produces an intense and joyful awareness of the world. The depressed and depressed were touched to tears by the discovery of a depth of feeling of which they had not thought themselves capable. Although short-lived and transient, this happy state of affairs was a welcome and a tonic. The emotional lability of the premenstrual patient in this experience days later often created similar relation. Of course, these subtleties cannot be profound in numerical terms. In human terms, however, the short but impactful impact of LSD on the dying patient is not to be underestimated.

## THE HALLUCINOGENS

*Acorus calamus* is a plant known in Asia, Europe, and North America for its medicinal properties. It was also known as flag root, rat root, and sweet calamel. During the great depression of the 1930's it was

Recently one of our informants well acquainted with the habits of the Indians of northern Canada, reported his personal experiences with rat root collected in northern Alberta by the Cree. He reported that nearly all the Indians over age 40 used rat root regularly but the younger Indians were unfamiliar with it and its use was discouraged by physicians who practiced there. Rat root users seemed to be healed and were not subject to alcoholism. The Indians used rat root (a) as a stimulant; (b) as a diuretic; (c) as an analgesic; (d) for relieving toothache, headache, etc.; (e) for relief of asthma; (f) for oral hygiene, and (g) to relieve hangover.

Our informant had over the years tested these medicinal qualities and generally confirmed them. It was particularly effective for alleviating fatigue. On one occasion, he walked 12 miles in the northern woods to fight a forest fire. He was out of condition and was exhausted at the end of the march. He chewed and swallowed 2 inches of rat root. Within 10 minutes the fatigue vanished and on the return march he seemed to be walking 1 foot above the ground and felt wonderful. The effect was very unlike amphetamine. On his return home he was very exhausted but after a night's sleep was normal.

LSD was used not only in "flend," but in Chicago to relieve pain. It has powerful analgesic properties. Kast and Collins (1964) gave LSD to a group of patients many of whom knew they were dying of terminal cancer. In addition to their relief from pain some of the patients developed a peculiar disregard for the gravity of their situation. They spoke freely of their impending death with much less depression than they had had previously. The newer attitude to death lasted months after the analgesic period. It is likely those who have a vision of the psyche and the ego as a part of the same entity, this wish life after death. This would account for the new more beneficial frame of mind for those patients who were dying.

One of our subjects recently told us that since his psychedelic experience several years ago, he no longer feared death.

The bark of the root of *Tabernaemontana iboga* contains about 12 alkaloids (Downing, 1962). Of these the best known is ibogaine, a tryptamine derivative. This plant, named in 1889 by Baillon, was used by the natives of West Africa and the Congo to increase resistance against fatigue and tiredness and as an aphrodisiac. Dybowski and Landrin (1901) extracted the psychologically active alkaloid which they named ibogaine. They reported that the natives considered the plant equivalent or similar to alcohol, that it was a stimulant which did not disturb the thought processes of the user.

The recent impassioned discussions of the possible effects of LSD on chromosomes is paralleled by similar discussions over masturbation. It was stated with the utmost confidence that not only would the secret vice result in the collapse and insanity of those who practiced it, but should they be unfortunate enough to survive to adulthood, their children would suffer for their sins. There was no evidence for this, but it did not prevent men of the highest integrity from stating that it was undoubtedly so.

While not everyone might choose to die with his mind stimulated by LSD, as did Aldous Huxley (Huxley, L.A., 1968), rather than dulled by morphine, such matters call for careful consideration, for each of us owes God a death.

Victor Gollancz (1969) is correct, and there is an LSD subculture, the dangers, particularly to those under therapy, require very careful consideration. Leaving out chromosome damage, perhaps the most important danger of LSD is the possibility of long-term personality changes. There is no doubt that this can happen, though it is not clear how often. The danger is that the more people take the drug, the more they increase the danger. One of the most unfortunate is that the appropriate remedy for a bad trip is another one, frequently alcohol. The danger of this is that the person who has a bad trip is on a par with the alcoholic slogan of having a hair, or even the tail, of the dog that bit you! The sensible response to a bad trip is to get help, to get someone to help you, to get someone to give you guidance without delay. Some people, who are clearly developing a dependency on the drug, are not able to do this. In the case of Osmond, (1966a) combined with usually depressed mood changes with an anxiety and sometimes thinking difficulties, take psychodisks and LSD, and the result is a very serious condition. The probable outcome is a severe and prolonged bad trip, or sometimes the precipitation of a more-severe and actual illness. If these dangers are not taken seriously, the LSD subculture will continue to grow, and would avoid trying to treat themselves by these desperate means.

The sociological, psychological, political, and other consequences of psychedelic experience, however induced, occurring in the majority or even a substantial minority of a postindustrial population, is likely to affect most of us far more than a few space jaunts for carefully selected heroes and heroines. The record is merciless: practical men of sound sense are nearly always wrong about the future, though never lacking in certainty. While the winds of change strive to gale force grounds, they perform the ostrich acts and proclaim that they have everything under control. But the gale does not blow itself out because of their rhetoric, and to survive, we need to sat a course that carries us into the future. Some years ago one of us wrote (Diamond, 1957a):

...these agents have a part to play in our survival as a species, for that survival depends as much on our opinion of our fellows and ourselves as on any other single thing. The psychedelics help us to explore and fathom our own nature.

We can perceive ourselves as the stampings of an automatic socio-economic process, as highly plastic and conditionable animals, as congenies of instinctive strivings ending in loss of sexual desire and death, as cybernetic gadgets, or even as semantic code-units. But there is something more to us than these things. We have a degree of truth in them. We may also be something more, "a part of the main," a striving siver of a creative process, a manifestation of Brahms in Atman, an aspect of an Infinite God immanent and transcendent. We may be something more, a part of the great cosmic struggle of the self and of other people's selves have all been held in slavery by men and women. I expect that even what seem the most extreme notions are held by some contributors to these pages. On one side, the extreme view is that of the determinists, from which differing concepts are likely to differ greatly; and that the courses of action determined by those views will differ...?

... I believe that the psychedelics provide a chance, perhaps only a slender one, for homo faber, the cunning, ruthless, foolhardy, pleasure-greedy toolmaker, to merge into that other creature whose presence we have so rashly presumed, homo sapiens, the wise, the understanding, the compassionate, in whose fourfold vision art, politics, science, and religion are one. Surely we must

## Altered States of Consciousness

If you're doing anything with meditation, drugs, hypnosis, dreams, subjective exploration of any kind, this is a useful book. John Lilly borrowed our review copy and returned it with particular recommendation for these articles:

A Special Inquiry into Auditory Hallucinations in the Nature and Character of Various States of Consciousness

Toward the Experimental Control of Dreaming

A Study of Dreams

The "High" Dream

Mutual Hypnosis

The Effects of Marijuana on Consciousness

Subjective Effects of Nitrous Oxide

Attitude and Behavior Change Through

Psychic Drug Use

Psychic Agents in Creative Problem Solving

Guide to the Literature on Psychiatric Drugs

An Electroencephalographic Study of the

Operant Control of the EEG Alpha Rhythm

and Some of Its Reported Effects on Consciousness

Elsewhere in the CATALOG is a book called Direct Use of the Sun's Energy. Tart's book is moving toward Direct Use of the Mind's Energy.

—58

## Altered States of Consciousness

Charles Tart, ed.

1969; 575 pp.

\$9.95 postpaid

from:

John Wiley & Sons, Inc.

One Wiley Drive

Somerset, N.J. 08873

Western Distribution Center

1530 South Redwood Road

Salt Lake City, Utah 84104

or WHOLE EARTH CATALOG

1. The first three to five hours are usually individual, to try to relax and let go.
2. Spouses' problems; usually like spouses separate for first group meetings. If both are present, it is better if you start in different areas, but if you both want to be together, okay.
3. Don't be surprised at anything you may see the therapist doing he knows what he is doing.
4. A person who is having trouble breaking through needs something to resist against—the therapist may hand wrestle, or be on top and have them resist (others on top as well). The person can exert all his strength to break loose.
5. Anyone you are in trouble, don't hesitate to ask for help.
6. As people make break-through you'll hear laughing, crying, screaming. Don't worry about it, or get concerned.

## Journeys Out of the Body

Many people doing drugs, meditation, or some of the occult stuff have experienced an astral projection or out-of-the-body experience. Sometimes it was marvelous, other times it scares the hell out of you. If you want to find out more about this, you'll find practically everything written in the "I've got a secret that you're not spiritual enough to hear (believe and pay and maybe I'll tell)" school. Or by people who have a system to push. This book is by a person who's clearly a sensible man and who's trying to tell it like it is, instead of what he believes about it. And willing to put himself on the line—he's worked on developing his ability in my lab several times now. Techniques for leaving the body, evidential stuff (am I crazy?), meetings with the "dead," visits to other "planes," frustrated attempts to find somebody who really understands this phenomena astral see. [wow]. No ego trips, either. Just a solid citizen who's been "out" a thousand times now and wants to pass his experiences to others so they won't have to go through some of the confusion and terror he did learning on his own.

(Suggested and reviewed by Charles Tart)

## Journeys Out of the Body

R. Monroe

1971

price not determined

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501 Franklin Ave.

Garden City, N.Y. 11530

or WHOLE EARTH CATALOG

7. Nothing is expected of you, don't expect anything of yourself—most people have a glorious trip.
8. Try to avoid improving anybody—you'll have a better trip.
9. Around three to four hours after beginning, a stimulus will be brought around to keep your energy level up.
10. Anyone you want to stop the trip, take some nitrous, 500 to 1000 mgm at a time. Nitrous is good for bad energy, will make it easier to stop.
11. If you have experience, if you want to come together, touch the other person's back. He may shake his head "no," or else turn and say, "Don't have hurt feelings, or guilt if they don't want to be with you, be freed to be yourselves."

The change that then came over Bill was dramatic. He began mumbling typical induction suggestions about relaxing, but the course of a few minutes his voice became dramatic and forceful. He suggested that Anne see a diamond in her hand and concentrate on it and that she almost instantly began to see a diamond in her hand and her mind would go blank. Then he very forcefully suggested physical relaxation as he continued her into hypnosis: when he reached 20 his whole manner changed and became relaxed and soothing. Anne reported a depth of 22.

Bill then began talking about a "hallucinatory" journey that he and Anne were on together. His voice was confident, smooth, relaxed, and completely convincing that he was describing actual events that were happening rather than anything "unreal." They were standing on a mountain slope, in front of the entrance to a tunnel. They walked and talked down this tunnel, with the walls of the tunnel appearing that they would be going deeper into hypnosis as they walked deeper into the dark tunnel. It was quiet in the tunnel, all outside noises had vanished, and an invisible feeling of pleasantness and significance pervaded the tunnel. Anne reported a depth of 35 after a few minutes of this, and Bill continued describing their walk down the tunnel.

The tunnel was absolutely real to Anne and Bill (and to Carol), as real as any experience in life. Anne said that she felt as though "I'm coming out of a strange way." Anne said it felt as if she had "a light" coming out from under her eyebrows, and "it wasn't illuminating anything in my seeing, yet it felt like I was looking at something without seeing them." Both Ss reported feeling the texture of the rock walls, which ranged from soft and slippery at places where it seemed so smooth to quite hard where the bare rock was exposed.

Anne and Carol were intensely curious as to what lay at the end of the tunnel, and that and Bill would not let them reach. This resulted in an interesting aftermath. About a month after this session, Anne was a subject in a group hypnosis test. As she knew what the induction procedure was, she decided to "go" back to the tunnel and explore it as soon as she was hypnotized but before the suggestibility test items were administered. She found herself running along the tunnel, hurrying to reach the end and before the test items. At the end of the tunnel she found a cave, blazing with brilliant white light, and occupied by an old man of angelic appearance. The room was filled with music from an unseen source. Anne repeatedly asked him what this experience meant. He ignored her at first, and then, after she persisted very sternly, that he could not answer her question because Bill was not with her. Anne then found herself back at the group hypnosis testing.

I asked the Ss about their perceived bodies during the experience and found that they were curiously disembodied much of the time. They mentioned feeling light or floaty but no bodies at times, and Anne reported that they walked through each other sometimes. When Bill commanded Anne to give him her hand he took it, and she said, "I was surprised that Anne's hand came back to my body, sort of. It was almost as if we were moving around with just heads. When Bill said give him my hand, I had to kind of conjure up a hand."

There is a better, faster way. Happily, there seems to be built-in directional senses if their uses can be mastered. The "rip" is the catch. As noted elsewhere, you "think" of the person at the end of your destination—never a place, but a person—and use the method prescribed. In a few moments, you are there. You can wander around undisturbed for hours, or you can quickly return by disorienting when you rush headlong toward a building or tree—and go right through it. In order to avoid such traumas, forget about returning. Just enjoy the trip. You never quite recover over the physical-body conditioning that such things are, so at least I have not. I still have the tendency to move in the direction of the door—only to realize and stop the situation when my Second body hand goes through the doorway. Irritated with myself, I then dive through the wall rather than the door to reinforce my awareness of the Second state characteristics.

In conjunction with this convenient method instinct that it is unaffected by distance, you are given a further problem. The automatic regional system is accurate, too accurate. And that is the problem. It works by what and of whom you think. Let one small stray thought emerge dominantly for just one microsecond, and your course is deviated.

This near area is not a pleasant place to be, albeit completely understandable from this viewpoint. It is a level or plane where you "belong" until you learn better. I don't know what happens to those who don't learn. Perhaps they stay there forever. The moment you dissociate from the physical via the Second body, you are upon the fringes of this close-by section of Locale II. It is here that one meets all sorts of disoriented personalities and intimate beings, such as described in Chapter X. If there is some protecting mechanism for the neophyte, it was not apparent to me. Only by cautious and sometimes terrifying experimentation was I able to learn the art or trick of passing through the area. I still am not sure precisely of all this learning process, and so have presented only the obvious. Whatever it was, I happily have not been troubled in such passages for several years.

Anne and Bill read the transcripts over and were both shocked. They had been talking about their experiences to each other for some time, and found they had been discussing details of the experiences they had shared for which there were no verbal words or facts. I.e., they felt they must have been communicating telepathically or that they had actually been "in" the nonworldly locales they had experienced. This was frightening to both of them and had seemed a lovely shared fantasy now threatened to be something real.

The most coherent and articulate sentence which came was this: There are no differences but differences of degree between different degrees of difference and no difference.

Wonderingly, but with outward calm, I undertook to arouse Huxley from the trance state by accepting the partial clue given and by saying in essence, "Wherever you are, wherever you are doing, listen closely to what is being said, and slowly, gradually, comfortably begin to act upon it. Feel relaxed and comfortable, feel a need to establish an increasing contact with my voice, with me, with the situation I represent, a need of returning to matters in hand with me not so long ago, in the not so long ago belonging to me, and leave behind but AVAILABLE UPON REQUEST practically everything of importance. KNOWING BUT NOT KNOWING that it is AVAILABLE UPON REQUEST." And now, let us see, that's right, you are sitting there, wide awake, rested, comfortable, and ready for discussion of what little there is.

As he watched, he became annoyed with me since I was apparently trying to talk to him, and he experienced a wave of impatience and requested that I be silent. He turned back and noted that the infant growled before he was verbal, and then, after a few minutes of walking, talking, in utter fascination he watched this growing child, sensed its subjective experiences of learning, of venturing, of following I followed it in distorted time through a multitude of experiences as it passed from infancy to childhood to school days to early youth to teenage. He watched the child's physical development, sensed its physical and subjective mental experiences, sympathized with it, empathized with it, rejoiced with it, thought and wondered and learned with it. He had one idea, as it was, as it was, and he continued to watch it until finally he realized that he had watched that infant grow to the maturity of 23 years. He stepped closer to the young man and he saw that the young man suddenly realized that the young man was Aldous Huxley himself, and that this Aldous Huxley was looking at another Aldous Huxley, obviously his early father, just across the vestibule in which they both were standing; and that he aged 52, was looking at himself, Aldous aged 23. Then Aldous, aged 23 and Aldous aged 52, suddenly realized simultaneously that they were looking at each other and the curious question that arose in the mind of each of them. For one the question was, "Is that my idea of what I'll be like when I'm 52?" and, "Is that really the way I appeared when I was 23?" He was aware of the question in the other's mind. Each found the question of "Extraordinarily fascinating interest" and each tried to determine which was the "actual reality" and which was the "mere subjective experience outwardly projected in hallucinatory form."

When I have been in my dreams for two or three nights, then I know that a lucid dream is at hand. And the lucid dream itself is often initiated and accompanied all the time by the sensation of flying. I have been in lucid dreams for years, and I have been in lucid dreams for a few backwards, and once, dreaming that I was inside a cathedral, I flew upwards, with the immense building and all in it, at great speed.

You are unaware of differences in sex, you yourself as a part of the Whole, are both male and female, positive and negative, electron and proton. Man woman love moves to you and from you, parental-childing-elding and idyllic and ideal, in any way in which you wishes about you, in you and through you. You are in perfect balance because you are where you belong. You are Home.

Beyond all this, yet not a part of it, you are aware of the Source of the entire universe in your experience, of you, of the universe within your ability to perceive and/or imagine. Here, you know and easily accept the existence of the Father. You are the Father, countless creations. How or why, or do you not know. This is not a question, it is a fact. You are already because you are in your Right Place, where you truly belong.

Each of the three times I went there, I did not return voluntarily. I came back badly, reluctantly. Someone helped me return. Each time I returned, I was not the same. I was different. I was different for days. I felt as an alien migrant, among strangers in a land where things were not "right," where everything and everyone were so different and so "wrong" when compared with what you belonged. Acre loneliness, nostalgia, and something akin to homesickness. So great was it that I haven't tried to go there again.



The pictures and the images acquired in D.R.'s mind like these were in a can. His mind was alive with their flicking dance, and when he awoke, and it seemed that way, still he had the world of sunlight and crawled into the darkness of the mine.

The mine.

The mine was a mine hidden under the fallen tipple, there by the Tree Fork road.

It was an easy entrance this time. No digging, no scrubbing. The first tunnel he had made the first flicking dance, and when he awoke, and it seemed that way, still he had the world of sunlight and crawled into the darkness of the mine.

The old wood formed a lattice overhead, a network that allowed an onsets degree of sunlight to filter through. D.R. lay a moment, rested, looking up, peaceful in his body, the clatter in his mind already settling, slowing down.

(continued)



## Psychic Discoveries Behind the Iron Curtain

The Russians are coming, the Russians are coming! Without the historical sect of disbelievers that has kept ESP research in the country limited to card guessing and tall tales, the Russians have been developing a number of laboratories and qualified people to do this. This book is a relatively rare sometimes-flamboyant tour of the Russian work as well as samples of Bulgarian, Czech, and other iron curtain researchers.

The whole book blows my mind. The Russians are years ahead of us in using and understanding clairvoyance, telepathy, auras, and related areas. The Bulgarians appear to have made and implemented fundamental discoveries in learning (not teaching rates, but getting people learning five to ten times faster). The Czechs are ahead of us in pragmatic applications of astrology (birth control, fertility, sex determination of children). Most of the strange and wondrous powers that have been taught don't exist are being explored, trained, extended, and researched by well-known, well-qualified, and well-financed government researchers.

One result of this book is that our parapsychologists are trying to get over there to learn how to start catching up. Another result is that this publication may force the United States government to release its own secret work (which the Russians know about but which has never been reported here). Is there an ESP gap? Who will have the first telepath on the moon? From the looks of this tour through inner space you can be sure it won't be one of us.

[Suggested and reviewed by James Fadiman]

## Psychic Discoveries Behind the Iron Curtain

Sheila Ostender and Lynn Schroeder

1970, 443 pp.

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New York, N.Y. 10019

or WHOLE EARTH CATALOG

Dr. S. N. Dobronravov of Sverdlovsk reported that up to 72 percent of children had skin sight potentials. "It is most noticeable in children from the ages of seven to twelve years." A scientist at this convention agreed that the "supernatural, carmine" atmosphere whirling around eyesight sight was harming the subjects and the investigation. Work would continue quietly with subjects anonymous to the public.

Dr. Novomieski was quietly trying to get information to help the blind. He found that blind adults didn't take in skin sight as readily as did blind children. The adults probably didn't believe that hands could see. Secondly, their acquired sensitivity of touch, and the habit of trying to "read" textures, blocked feeling of the dermo-cutaneous sensations. But when Novomieski put colored paper in insulated trays, ten blind adults suddenly got all the eyesight skin sensations that seeing students experienced. "With the insulated tray," Novomieski reported, "we didn't find a single blind person who did not have positive tendencies toward skin sight."

"Our support is from the highest levels of government," said Lozano, "the highest. The government has given us excellent conditions for our work. We never have to worry about money here. We can go ahead on any project, in any area of paranormal. Vanga is the first clairvoyant in the world to be put on the state payroll and our government has created good conditions for researching premonitions." Lozano said this with considerable pride—pride in Bulgaria and her remarkable people to whom Lozano is extraordinarily dedicated.

In actuality, this is a French lesson. Against the background of Brahms or Beethoven, the voice of the teacher seems sometimes businesslike, as if ordering work to be done, sometimes soft and tender, as if talking to a child. The French teacher is in a special rhythm, on a special scale of intonation, French words, idioms, and their translations. But the students aren't really listening. They've learned not to pay attention, not to think about whether they hear the teacher. "Relax. Don't think about anything." Their conscious minds are to be totally occupied with the music.

## Psychological Exercises

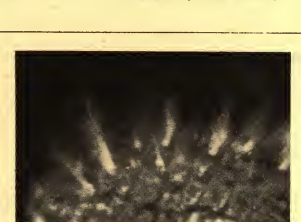
Orage, who edited "New Age" in the 'thirties, knew everyone. His friends, like Pound, Gide, and Proust, were certainly worth knowing. Those were the days when intellectuals thought they could change the world just by pointing out what was right and what was wrong. Hahl! Anyway, Orage had a secret kick, too, and it was exercising the grey matter. For example, while reciting "Jack and Jill" write down "Mary Had a Little Lamb." For example, while you are talking to someone, or reading this, count from 100 to 0 backwards by threes. You'll find that with some practice you really can do these things, just like learning to pat your stomach while rubbing your head. And then where are you? Fun.

[Suggested and reviewed by Stephan Chodorov]

## Journal of Transpersonal Psychology

This is a journal that is bringing old-fashioned "all-I-want-is-the-facts-ma'am" into one step closer to the world of great fundamental concern. It publishes articles on scientific subjects such as ecstasy, transpersonal education, and deep hypnosis, as well as unusual articles such as Baba Ram Dass's lecture to the staff of the Menninger Clinic and a test to see if you can tell the difference between a mystic and a physicist. If you are willing and able to go beyond West's Tales and Tate Magazine, to alpha feedback and experimental yoga this journal will make it easy to walk the distance without leaving your scientific or your telepathic friends behind.

[Reviewed by James Fadiman]



Each of these pictures shows a human finger magnified fifty times. Picture at top shows that of a healthy man, calm and even-tempered. Photo at bottom shows the finger of an overworked, emotionally tense individual. In a state of fatigue, more energy seems to leave the body.

The next day surprised students discover that even though they were sure they'd learned nothing, they remember and can easily read, write, and speak from 120 to 150 new words also during the two-hour session. In the same way the toughest part of the language course, the grammar rules, painlessly take root in the minds of multitalented students. Within a month students with no prior knowledge of a language have accepted two to three thousand vocabulary words and have a good grasp of the grammar. Tests a year later show they still know all the material learned in this incredibly effortless way.

How does it work? Lozano based his method, which can help you learn almost to fifty times faster, on the Yoga technique of relaxation, Savasana. Using suggestion and autuggestion, muscle tension is relaxed and the brain relieved of the usual anxieties and stresses. In this relaxed "free state of consciousness," or meditative state, fatigue quickly vanishes. Freed from all distractions which hamper its functioning, the brain resembles a sponge able to absorb knowledge of all kinds. The secret of the technique is that material doesn't reach the memory in the ordinary way, because the student doesn't participate consciously in the process.

Read at sight the following unspaced passage in which each second word has been spelled backwards:

Aanoosetatsatsemonilfiniheddbanpneemsozstafinlsiregrosire  
nogoutfothecurde. Thetingswalkswedromoinasmethe:  
nahcbevenosafelwofvofahntenatstahstahvofwebtomion  
hcaidre dnoisvowandnohetingvurxvohcuhcneahselvof  
rehtetvemoosrehtafvofahntenatstahstahvofwebtomion  
siundertoodstatercesepirminadtothenorepsthahsbent.



Psychological Exercises & Essays  
R. T. Orage  
1930 . . . 1968; 121 pp.

\$3.00 postpaid

from:  
Samuel Weiser  
724 Broadway  
New York, N.Y. Y. 10003

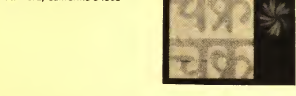
or WHOLE EARTH CATALOG

## Journal of Transpersonal Psychology

Anthony Sutich, ed.

\$7.50 /yr (semi-annual)

from:  
P.O. Box 4437  
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Statement of Purpose: The Journal of Transpersonal Psychology is concerned with the publication of theoretical and applied research, original contributions, empirical papers, articles and studies in meta-needs, ultimate values, unitive consciousness, peak experiences, ecstasy, mystical experience, B values, essence, bliss, awe, wonder, self-actualization, ultimate meaning, transcendence of the self, spirit, sacralization of everyday life, oneness, cosmic play, individual and species-wide synergy, maximal interpersonal encounter, transpersonal phenomena, maximal sensory awareness, responsiveness and expression, and related concepts, experiences and activities. As a statement of purpose, the formulation is to be understood as optional to individual or group interpretations, either wholly or in part, with regard to the acceptance of its content as essentially naturalistic, theistic, supernaturalistic, or any other designated classification.

...the reason why our sentient, perceptive, and thinking ego is not nowhere in our world picture can easily be traced in seven words: because it is ITSELF that world picture. It is identical with the whole and therefore cannot be contained in it as part of it. ...all phenomena and their development are simply manifestations of mind, all causes and effects, from great universes to the fine dust only seen in the sunlight, come into apparent existence only by means of the discriminating mind. Even open space is not nothingness. ...the stuff of the world is mind stuff.

Mantra gets so far out, that after I did it for two days and two nights solid in Nepal once, I stopped to go to sleep and of course it continued going. But instead of it continuing going just in my voice it continued going... what it sounded like was a cross between the Mormon Tabernacle Choir and the O Heavenly Day Chorus. It's hard to hear a thing except it was made up of all old voices and they stretched back in time and space in infinite direction... you, know, distance. All the time I was doing it, I was doing it and the wind was Om Mani Padme Hum and the air condition was Om Mani... the whole thing. I had tuned in on that place where that we all could hear. There was no longer. I was doing it and I was doing it to a yogi and I said, "What's happening? I'm going crazy." He said, "You've tuned in on the Om, that's the place. You've tuned in on that place. There it is. That's where they're all hanging out."

Now it turns out—this is the one that many of you will find hard huddling, but it's the way I understand it now, having been through this particular trip I've been through—that Freud is an absolutely neglected spokesman and master of second-chakra preoccupation, that is, of those beings who were primarily involved in second chakra. Sit could say quite honestly, because it is true at the second chakra, that religion is sublimated sex. Now it is true that in his generalized libido theories and the idea that all the body is erogenous... there are a lot of ways in which he slips over the edge; but his system is primarily concerned with the second chakra. Jung is primarily concerned with third chakra. Jung is primarily concerned with fourth chakra. I would point out that there are still the fifth, sixth and seventh chakras. And these are in terms of other kinds of psychic spaces and ways of organizing the universe and understanding what's happening. So that to the extent that you have "uncooked seeds" of the second chakra and you have a Freudian analysis, he's going to help you cook those seeds. He's not going to do much about where you're stuck in the third chakra, particularly. And he isn't much to say about the fourth chakra, which is what Jung pointed out about Freud.

Courses on Altered States of Consciousness are being offered at Sonoma State College, the University of California at Davis, and Stanford University. Within five to ten years, it would be offered as generally as present courses on Motivation or Abnormal personality.

Let some prepared incident be staged and played before a group of students, who shall afterwards report it correctly.

E.g., the lights are suddenly turned off. Student A, blows a police whistle to scatter the group. Student B, and some noisy crowd take takes place between them. Student B, escapes, making some remark as he bangs the door behind him. The lights are now turned up; and the rest of the students are called upon to report fully, accurately and in proper sequence the events of the episode.

Arrange the following sentences in order of their intellectual content; and give reasons for your order.

Where law ends, tyranny begins.  
The road to Hell is paved with good intentions.  
A desire in psychology has the same status as a force in physics.  
Our antagonist is our helper.  
The world is a comedy to those who think, a tragedy to those who feel.  
Man's character is his destiny.  
A stitch in time saves nine.





What I find missing from the pages of the *Catalog* are tools to help groups work better together. Too often, I think, we simply assume that like-minded people can get along with each other, find constructive work patterns by instinct, and so on. We lost around a lot of words like "openness" and "honesty," but the words and the practices are two different things. There, six months after arriving on the homestead (or buying the big communal house in the city, or whatever), fights break out around the question of *what to do* with the dishes. Some folks flare and smolder; they leave a few weeks later with a really full head of bad memories.

Premier: we haven't had learned to listen effectively, give helpful feedback, to offend about their here-and-now behavior. I can argue for a common task, be it building a barn or living collectively. We can build community by good intentions alone, or by improving our freedom and attitudes to be "honest." In short, we need tools.

With that lengthy preface out of the way, I want to introduce sensitivity training. Before everyone starts to growl, let me make clear what I am not talking about. I don't advocate all the rote, stereotyped stuff now coming out in movies and novels, the scenes where people are licensed to call each other no-good S.O.B.s for a weekend. No prewriting, no destruction, no confessions about horrible misdeeds and terrifying anxieties. What I am talking about is the more constructive part of the sensitivity training movement, as represented by the National Training Laboratories: training that focuses on the here-and-now aspects of group behavior, leadership, communications, and the like.

Since the sensitivity training movement has exploded into every imaginable direction, and since anybody can hang out a single and "run" groups, folks interested in exploring this area should be wary and cautious. Even the legitimate trainers are expensive, to the best of \$100 a day for the best of the bunch. Fortunately, there are some books around that qualify as tools; here are three of the best that I know about:

(1) *The Practice of Creativity*, George M. Price, Harper and Row, 1970, \$8.50. This is about Synectics, but it's much better than the other Synectics book the *Catalog* used to list. Price's book qualifies as a true tool; there are a variety of suggestions for improving the creative output of small groups. The entire Synectics problem-solving process is outlined in detail, and a number of techniques, if conscientiously applied, really help in all sorts of situations. One example: the Spectrum Policy, which says that you're not allowed to criticize an idea until you've said something positive about it. This sounds incredibly half and artificial, I'm sure, but it's not. It's actually improved half a dozen work situations that I've been in. Even the best-intentioned people are often unwittingly destructive in group situations.

(2) A Handbook of Structured Experiences for Human Relations Training (two volumes), J. William Pfeiffer and John W. Sussman, University Associates Press, Box 615, Iowa City, Iowa 52240, 1969, \$3.00 each volume. These are two small volumes of exercises in group processes. Some sample titles: "Hiding in the Dark," "Status-Interaction Study," "Developing Group Commitment," "Practicing Intuition Practice." Not all of these will be helpful to every group, but most of the exercises have universal use. **IMPORTANT NOTE OF CAUTION:** These exercises are *not* toys; they're to be used only when you're sure that you're using them for a purpose other than their use. Most of the exercises are designed for use by a trainer in a laboratory group. If, say, a community uses some of these, the person acting as trainer should not be from that community.

(3) Basic Reading in Human Relations Training (in eight mimeographed parts), Service to Dioceses, Episcopal Church Center, 815 Second Avenue, New York, N.Y. 10017, apparently free of charge. This series is what it says it is, a collection of written materials on all phases of group processes as chosen in laboratory situations. The advantage is that the editors have collected many papers on the same topics, so the reader has a choice of frameworks on which to hang his understanding. The set includes a good bibliography and list of further sources.

For people interested in exploring further, the NTL Institute for Applied Behavioral Science runs labs all over the country in various group dynamics. Their address is 1201 16th Street, N.W., Washington, D.C. 20036.

Finally, a statement from George Price, with which he closes his book: "The conscious practice of creativity as an everyday activity is particularly valuable because it permits you to rationalize, accept, and gradually expect miracles of yourself."

Go well,  
Bob Fried  
Berkeley, California

## Love and Will

Here's a book to disabuse you, and you, and you of any notions you might have about there being anything very special in your sufferings; or anything terribly unique about your dilemmas and your fuck-ups. May describes our external and internal environments in their relationship to each other with a mind-blowing accuracy that evokes recognition—"Yes, that's me, all right, and that's just the way it is these days". Far from being brought down, one feels embraced by a warm intelligence, and released that one has minds like May's around. A sort of psychological ecology. May points to the price we pay for every step of "social progress", and suggests that if perhaps we have unwittingly but consistently thrown out the baby with the bath water, then maybe it's time to find the hell some other way to get clean.

(Reviewed by Diana Shugart)

If we repress the demonic, we shall find these powers returning to "sicken" us; whereas, if we let them stay, we shall have to struggle to make them innocuous in order to integrate them and not be overwhelmed by impersonal power. And (what a refreshingly honest motto to top up in a psychotherapist's office!) *either way will hurt.*

4.8 Psychology  
Learning

## Psychology Today: An Introduction

My god, they've done it—and I'm stunned. After spending more years than I care to remember dalling with this sort of subject matter, I expected to skim through this book, and I tried—for four hours after four hours. First off, it's the most fantastic visual presentation I've ever encountered in a textbook; every page is arresting and imaginative and many are clearly and simply beautiful. It's the first time I've ever seen such consistent remembering that the subject under study is that of me and you and our feelings. This would surely be the book to start with for anyone interested in finding out what psychology is all about. There are eight major sections, each representing a main branch of the field, and each being covered clearly and thoroughly. There are two companion volumes, the Instructor's Guide, and the student's workbook, *Involvement in Psychology Today*. The Instructor's Guide lists appropriate films and suggests demonstrations for each section. "Involvement" is designed to do just that—the suggested projects are unusual and look like fun. There are good bibliographies here too, for those interested in pursuing particular subjects further, including a lot of wonderful books that didn't used to be considered proper.

These things about the content especially impress me: The scientific study of behavior is treated cogently so that anyone can learn the basic of scientific methodology. And this without the usual accompanying tone that only what's measurable is worth studying, a tone that so pervades many textbooks that as an undergraduate I despised of learning anything interesting or meaningful about human beings. This stuff really turned me on to human behavior and the study of it. The sections on drugs and craziness are also impressive in that the subjects are tackled head-on; there's no evasiveness and no apparent prejudice. There is lots of good information and, best of all, a powerful feeling conveyed of what it's all about.

The authors have clearly attempted to make this book super-relevant to today's world. They have succeeded.

(Reviewed by Diana Shugart)

## Developmental Psychology Today

Again, a beautiful and stimulating book, all about growing up—and around, in and out, and sideways. All the ways we grow, how we get stuck, what we need to get it together and what happens when we don't. These CRM books really make anything else on their subjects taste like dry oatmeal and read like an abridged, unillustrated *Dick & Jane*.

(Reviewed by Diana Shugart)

## Developmental Psychology Today

1971; 575 pp.

\$12.95 postpaid



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Normality  
It is customary to start with definitions, but volumes have been written attempting to define the concept of normality—with very little success. Using any criteria, there is no such thing as a person who is totally normal in all respects and at all times. It is totally abnormal. Neither is there such an entity as an "emotionally disturbed child." Emotional disturbance is not a disease, like diabetes, that is either present or absent in a given individual. In current usage, "emotional disturbance" is an umbrella term that covers all degrees of behavioral problems in four major categories: antisocial aggressions, overwhelming fears, failures in learning, and infantile habits.



Love and Will  
Roth, 352  
\$7.95 postpaid  
from:  
W. W. Norton & Company, Inc.  
35 Fifth Avenue  
New York, N. Y. 10003  
or WHOLE EARTH CATALOG.

Just as the individual is feeling powerless and plagued with self-doubts about his own decisions, he is, at the same time, assured that he is free. God made him out of chaos and we have made chaos out of form, and it is a rare human being who is not, in some secret place in his heart, scared to death that they shall not be able to turn chaos into form again before it is too late.

## Psychology Today:

An Introduction  
1970; 707 pp.

\$16.95 postpaid

from:  
CRM Books  
1104 Camino Del Mar  
Del Mar, CA 92014  
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CATALOG

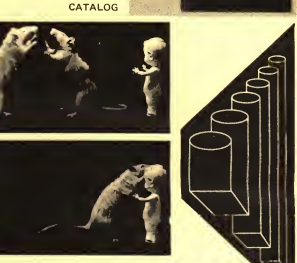


Figure 7.14  
Aggression elicited by shocks may be displaced to a doll if another rat is not present.

May hypothesizes that when a culture is moving toward integration and unity, it is a system of symbols, myths, and values that give integration to the members of society, and people are then relatively free from psychological breakdown. But when a culture is in the process of disintegration, it loses first of all its myths and symbols, then its system of values that have been based on these myths. Subsequently, people in large numbers come to seek psychological help. May believes that therapy will remain a critical part of our cultural scene until society discovers new myths and symbols to replace those we are currently losing.

Put the personality of a child in the body of a man, furnish a need to be loved and a fierce desire to be independent, allow a need to be self-directed, but leave out any idea of what direction to take, add an enormous amount of love but also the fear that it may not be accepted or returned, give physical and sexual powers without any knowledge or experience of how to use them—take these and place them in a society whose values and achievements are essentially inconsistent and certainly unattainable and whose concerns are seemingly misdirected and incoherent. Then you will have just begun to scratch the surface of adolescence.



If/Will remains protest, it stays dependent on that which it is protesting against. Protest is hell-developed will. Dependent, like the child on parents, it borrows its impetus from its enemy. This gradually empties the will of content; you always are the shadow of your adversary, waiting for him to move so that you can move yourself. Sooner or later, your will becomes hollow, and may then be forced back to the next line of defense.

This next defense is projection of blame. We find an illustration in every war of this unwitting confession of failure to integrate the demonic. In the Vietnam war, for example, Secretary Rusk and the Viet Administration blamed the Viet Cong for the escalation, and the Viet Cong—and those in the country opposed to the war—blamed Rusk and our own Administration. The self-righteous security that is achieved by means of this blaming of the other gives one a temporary satisfaction. But beyond the gross oversimplification of our historical situation which this exhibits, we pay a more serious price for such security: we have tacitly given the power of decision over to our adversary.

## Psychiatry and Social Science Review

This publication is Free, if you keep returning the card on the back. One need never buy a book. No need to return.

from:  
Nanna Bolting  
1104 Camino Del Mar  
Del Mar, CA 92014  
or WHOLE EARTH CATALOG

*Fritz Perls is not nearly as deceased as he seems. These two books preserve his power for all to tap and use. They also, to my mind, revolutionize the book industry. Gestalt Therapy Verbatim is made of tapes from Fritz' seminars and workshops at Esalen—and seldom will you find conflict, funk, truth and accomplishment so thick in a book. In and Out the Garbage Pail is Fritz' application of his methods to himself, through the very writing. It's autobiography, theory, poetry, and Fritz' many voices hassling each other through impasse into growth. The illustrations by Russ Youngreen raise the book by at least a dimension.*

[Suggested by Barry Stevens]



**\$3.50** postpaid

from:  
Real People Press  
939 Carol Lane  
Lafayette, CA 94549

or WHOLE EARTH CATALOG

Helpers are con men, interfering. People have to grow by frustration —by skillful frustration. Otherwise they have no incentive to develop their own means and ways of coping with the world.

- F: Okeh. Withdraw into your body, to your anxiety.  
G: My—I can feel my heart pounding, and my pulse is—and my arms, and my legs, and my neck . . . Actually it's not a bad feeling.  
F: Enjoy it.  
G: It's a good strong heart . . . I feel the warmth of the fire on my back—that's nice, too.  
F: Now come back to us.  
G: I'm not so scared now—it works every time, Fritz.

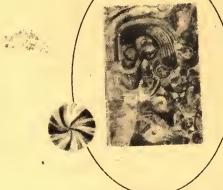
Look at the difference between the words "I am tensing myself" and "There's a tenseness here." When you say "I feel tenseness," you're irresponsible, you are not responsible for this, you are impotent and you can't do anything about it. The world should do something—you give you aspirin or whatever it is. But when you say "I am tensing" you take responsibility, and we can see the first bit of excitement of life coming out. So stay with this sentence.

As soon as you say, "I want to change"—make a program—a counterforce is created that prevents you from change. Changes are taking place by themselves. If you go deeper into what you are, if you accept what is there, then a change automatically occurs by itself.

You see how you can use *everything* in a dream. If you are pursued by an ogre in a dream, and you *become* the ogre, the nightmare disappears. You re-own the energy that is invested in the demon. Then the power of the ogre is no longer outside, alienated, but inside where you can use it.

You never overcome *anything* by resisting it. You only can overcome anything by going deeper into it. - You are spirit, be more spirit-like. If you are *more* *forming*, increase the performance. Whatever it is. If you go deeply enough into it, then it will disappear; it will be assimilated. Any resistance is no good. You have to go full into it—swinging with it. Swinging with your pain, your restlessness, whatever is there. Use your spite. Use your environment. Use all that you fight and disown.

### Gestalt Therapy Verbatim



**\$4.00** postpaid

from:  
Real People Press  
939 Carol Lane  
Lafayette, CA 94549

or WHOLE EARTH CATALOG

One remark that I get makes me embarrassed and angry: "When will the book come out?"

"Will you please leave me alone and let me do my thing! I am glad that I am excited and eager to write. I am glad to do something that integrates your needs and mine. So, don't push the river; it flows by itself!"

But I am holding onto my credo: "I am responsible only for myself. You are responsible for yourselves. I resent your demands on me, as I resent any intrusion into my way of being."

I know I am holding on just a bit too tight.



Topdog: Stop, Fritz, what are you doing?  
Underdog: What do you mean?

Cope and withdraw, contract and expand, implode and explode—like the heart imploding, contracting, and then exploding, opening to be filled. Permanent contracting leads to quick death, as does permanent extension.

### *In and Out of the Garbage Pail*

## The Primal Scream

...I read *The Primal Scream*. It is a long book written by a man who has stumbled upon a very valuable technique, and who still has not explored it to his total satisfaction, but who wants to communicate his whole experience and all he knows about it.

Dr. Janov says that neuroses and psychoses result from thwarted attempts made by the human organism in childhood to get what it wants. If an infant's *Primal Needs* (to be fed, kept warm and dry, to grow and develop at its own pace, to be held and caressed, to be stimulated) are not fulfilled, the infant must separate his needs from his consciousness, in order to avoid the pain of unfulfillment. The infant, and later the child, is forced to split into a real and an unreal self, to build a false persona which he uses in his struggle for gratification. Each time the struggle fails, each time the child is required to be other than he is in order to fulfill some aspect of his parents' needs, the resultant pain, unuttered and unshared, is stored within, to add another drop to the Primal Pool, the reservoir of hurt.

As the assaults on the real system mount, they begin to crush the real person. One day an event will take place which, though not necessarily traumatic in itself—giving the child to a baby sitter for the hundredth time—will shift the balance between real and ideal, and the child will be crushed. This is the moment of the Perinatal Scene. It is a time in the young child's life when all the past humiliations, negations, and deprivations accumulate into an inchoate realization: "There is no hope of being loved for what I am. I am not loved because I am not loved." The child's catastrophic realization by becoming split from his feelings, and slips quietly into neurosis. The realization is not a conscious one. Rather, the child begins to feel around his feelings, and these feelings are then "acted out" by the child as *their* words and does their thing. He acts unreal, i.e., not in accord with the reality of his own needs and desires. In a short time the neurotic behavior

Janov's cure for neurosis is simply to drain the Primal Pool, to enable his patients to feel their long-repressed pain and outrage, "...to feel and recognize the split, and scream out the connection that will unify the person again." It is to this goal that Primal Therapy is directed.

For the first three weeks of *Primal Therapy*, the patient is the therapist's only patient. Twenty-four hours before the first session, the patient is isolated in a hotel room and asked not to leave it until he reports for therapy the following day. During the first time in the room, the patient is told that he may smoke, drink, or take drugs. When the patient arrives for therapy the next day, he is asked to talk about his childhood. The therapist is instructed to remain mostly silent, listening, and non-judgmental; the patient is urged to sink into them. When he begins to invent defense mechanisms, they are forbidden him. He is told to lie on his back, arms and legs spread-eagled, and breathe deeply through his nose. When he begins to cry, he is told to let his tears rise in him, and he is told to give utterance. "Tell Daddy you're afraid!" "Momma, don't go!" The patient will begin to thrash about, experience nausea, have difficulty breathing, try to say it,

Finally, out it will come: a scream—“Daddy, be nice!” “Mommy help!”—or just the word “hate!” [he yaws, I have you! has] This is the Primal Scream. It comes out in shuddering gasps, pushed out by the force of years of suppressions and denials of that feeling. When the patient says, “I hate my mother,” he is saying something very important. He is saying those words bring with them all the torments of pain since many “mommes” would not even permit their children to call them “mother.” The thing that makes him say it is that he needs someone who needs a “mommy” helps release all the stored-up feeling.”

This process continues for three weeks, after which the patient will enter a therapy group, where for several months he will continue to experience what Dr. Janov calls *Primals*, his openness having done away with the barriers.

So that's what happens, and I was interested to read a while ago that it was happening to John Lennon, that he and Yoko were patients of Dr. Janov in his Southern California clinic. Then a friend brought me John's new record and said, “You men, here's your Primal scream. Here's how it goes: ‘Aaaaahhh!’”

[Reviewed by Roland Jacopetti.  
Reprinted from *Organ* (p. 241)]

## 1970; 446 pp.

\$2.95 suggested

from:  
Dell Publishing Company  
750 Third Ave.  
New York, N.Y. 10017

or **WHOLE EARTH CATALOG**

## MONDAY: THE SCHEME

On Monday morning, D.R. went to work expanding Emmitt's scheme.

(continued)

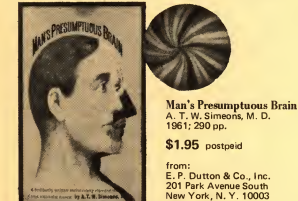


# Man's Presumptuous Brain

Dr. Simeons spent 18 years in India (had brilliant successes with malaria there). Is that why he's written the most useful yoga book to originate in the West? It's not a yoga book, of course, it's an investigation of psychosomatic disease (which will probably kill you and is certainly killing U.S.). Simeons' contention is that our brains, cerebral cortex specifically, have evolved clear out of coordination with the rest of our nature, body especially. It is the arrogant cortex that permits us to burn holes in our stomachs and in each other.

The book would be worth reading just for its central theme, but a whole lot more than just that is going on in Simeons and in the book. Unique document. —SB

[Suggested by Steve Baer]



Man's Presumptuous Brain  
A. T. W. Simeons, M.D.  
1967; 260 pp.

\$1.95 postpaid

from:  
E. P. Dutton & Co., Inc.  
201 Park Avenue South  
New York, N.Y. 10003

or WHOLE EARTH CATALOG

Psychosomatic ailments account for the bulk of urban man's ill-health and are the most frequent cause of his death. Man shares this kind of affliction with no other living creature.

# The Mind of Man

A good broad intelligent introduction to current work in brain science. Well illustrated.

—SB



The Mind of Man  
Nigel Calder  
1967; 288 pp.

\$8.95 postpaid

from:  
Viking Press, Inc.  
625 Madison Ave.  
New York, N.Y. 10022

or WHOLE EARTH CATALOG

Everyone would expectantly for the next half-hourly sample and its analysis. When, at last, it showed an oxygen consumption of 2.2 litres. Ramandand Yogi had voluntarily knocked his requirement down to one quarter of the minimum supposed necessary for the maintenance of life. The *Bhagavad-Gita*, holy-book of the yogis, remarks aptly:

As a blazing fire turns fuel to ash,  
so doing fire turns food into ash.

# The Savage Mind

Claude Levi-Strauss is the most famous — I mean, all the anthropologists recommend — He's so — I mean, so what if he's French — The most profound — Sartre couldn't — structural anthropology was what — Primitive doesn't mean — I mean, they knew what they were doing — So when — It looks crazy to us of course — They were just abstracting in a different — But you can analyze it once you — So you see, ritual is the — If you knew — The Indians always — I mean, what makes you think you're so logical?

[Suggested by Michael Hamer,  
Not reviewed by Lily Tomlin.]



The Savage Mind  
Claude Lévi-Strauss  
1962; 266 pp.

\$3.25 postpaid from:  
University of Chicago Press  
5801 Ellis Ave.  
Chicago, Illinois 60637

or WHOLE EARTH CATALOG

420 Mind Learning

The reptilian brain is so organized that it must respond to all incoming messages from the senses. On the ground these messages lead to purposeful actions, for instance burrowing for food or safety, but in the trees many of these actions became pointless. A reptile's behaviour is governed entirely by automatic reflexes. Its actions are not subject to reason. It does not have to make a choice between different ways of reacting. All its actions are due to sensory messages passing an ingrained reflex into operation, and over this process the reptile has no control.

A reptile, taking to the trees, carried with it all the ancient reflexes which it had acquired in millions of years on the ground. These reflexes which the change of habitat rendered useless must have been a terrible harassment to an already overworked reptilian brain. In the slow course of evolution these reflexes would have gradually changed into more suitable ones. But so desperate was the situation of the tree-living reptile that it would have become extinct long before normal evolutionary trends could have brought about a better adjustment to the new environment. Some sort of evolutionary shortcut was needed if the species were to survive.

The shortcut was biologically evolved out of just the right mutations occurring at this dramatic moment. It consisted of a mechanism which blocked useless messages from the nose and thus prevented them from reaching those centres of the brain which would have been obliged to react to them. In the olfactory lobes a few cells took over the function of a screening device, a sort of censorship or filter by which incoming olfactory messages were either suppressed or allowed to pass, according to their vital importance. This sorting or classifying of smells relieved the reptilian brain of the exhausting need to react to every message from the nose and thus, in the trees, proved to be an efficient labour-saving device.

The instinctive conflicts which produce an ulcer are usually concerned with sex or family relationships. The modern cortex refuses to admit such conflicts and to expose them to the processes of reasoning. Guilt of this type, therefore, continues to build up behind the censoring screen and forces the diencephalon into the drastic action which causes the ulcer.

This interpretation of the peptic ulcers suggests an obvious psychotherapeutic approach. Consciousness at the level of consciousness must be so far relaxed that the conflicting instincts, and the emotion of guilt which they engender, can be ushered into conscious awareness. Thereafter the psychological situation becomes identical with that of a person who has a guilty conscience on account of something he knows he has done, a situation which never produces an ulcer. If such a psychotherapeutic manoeuvre is successfully accomplished, ulcers may heal with surprising rapidity, often in a matter of days, and do not recur unless an entirely new guilt-provoking situation arises.

One of the most remarkable things about the growth of the cortex was the incredible acceleration of this process. When the earlier phases took tens of millions of years to evolve, the later phases were covered in a few hundred thousand years. It seems to be a general law of evolution that once a trend towards a single successful specialization has become firmly established, the speed with which this specialization develops gets faster and faster and may even develop of its own accord beyond the limits of usefulness. Meanwhile, the rest of the body continues to evolve at a slow and steady pace, so that the whole image is reflected in which all the other evolutionary trends are left far behind the outstanding specialization.

In modern man this development has already gone so far that there are signs of an evolutionary regression in the body in favour of a still more freakish growth of the brain. Modern man's body no longer reaches its full evolutionary maturity, as it did in Neanderthal man. Though the modern brain develops further than that of Neanderthal man, modern man's body remains behind in an earlier embryonic stage. He carries certain embryonic features on into adult life. An example of this has already been mentioned in connection with the distribution of human hair, but there are many other instances. One that interests us here is the relationship between the brain and the rest of the body.

In the light-skinned human races the development of the body is sharply braked in the last stages of pre-natal life, while the growth of the cortex is accelerated. There is some evidence to suggest that the negro's body is better adjusted to his brain. He is physically more mature at birth, and under ideal environmental conditions he averages a larger body. From an evolutionary point of view this makes his brain-body ratio more balanced.

A tendency to self-destruction seems to be inherent in the over-developed human brain. It is a situation similar to that in which a parasite strives to outgrow its host, and destroys it, thereby bringing about its own undoing. As the host can survive if the parasite's rapacity is kept within tolerable limits, so man will survive longer if he can release his body and his diencephalon from the too powerful cortical grip to which civilization is increasingly subjecting him.

In psychosomatic disease urban man is already paying a heavy price for his civilization, but he now has the means substantially to reduce the price if he will but make full use of them and realize to what extent his cortical presumption, deluding him that he has full control over his inner nature, has preyed upon him. When he is able to free himself eventually go about the solution of his most pressing biological problems through a better understanding of psychosomatic mechanisms and will not be able to adapt himself to the demands of the modern cortex full rein; for if he did this, all his behaviour would become governed by rigidly conditioned reflexes. His mating and breeding, his drinking and feeding and all his many emotions would then have to conform to a fixed pattern applying to everybody; this would be entirely contrary to the way of life which he has so far followed.

Changes in the size of the pupils of the eyes are an unconscious form of communication: large pupils denote interest and therefore make a woman seem more attractive. (Modified detail from Botticelli's *Primavera*.)

A housewife in her mid-thirties sits in a laboratory at the California Institute of Technology. In front of her is a screen and she has been asked to gaze at a spot marked in the middle of it. A strange picture appears briefly on the screen. It is a split face, the two halves joined down the middle. On the right, as seen by the housewife, it is a young child; on the left a young woman wearing spectacles.

Next, the housewife is shown a choice of several faces, and she is asked to point with her right hand at the one she saw. She describes the old man and denies that there was anything odd about the picture.

Like the face on the screen, the housewife's brain has been split down the middle. She underwent an operation for severe epilepsy in which the surgeon cut the great bundle of nerve fibres which normally connect the two sides of the roof of the brain. The operation was successful and the woman is now able to lead a more normal life. To see her doing her housework, swimming, riding a bicycle, and so on, you would not for one moment suppose there was anything unusual about her. But the tests devised by Roger Sperry and his colleagues show that she possesses two independent minds under one skull.

Several thousand Coahuila Indians never exhausted the natural resources of a desert region in South California from which today only a handful of wild families manage to subsist. They lived in a land of plenty, for in this aridly completely barren territory, they were familiar with no less than sixty kinds of edible plants and twenty-eight others of non-alimentary, cosmetic or medicinal purposes (Barrow). A single Spanish informant could identify two hundred and fifty species and varieties of plants and trees. Three hundred and fifty plants known to the Hopi Indians and more than five hundred to the Navaho have been recorded.

We have had to wait until the middle of this century for the crowning of long separated paths, that which arrives at the physical world by the detour of communication. It is a path which, as we have recently come to know, arrives at the world of communication by the detour of the physical. The process of communication thus assumes the character of a closed system. And we therefore remain faithful to the inspiration of the savage mind when we recognize that, by an encounter is also a part of the process. The scientific spirit in its most modern form will have contributed to legitimize the principles of savage thought and to re-establish it in its rightful place.







## Meditation in Action

The Venerable Trungpa Rinpoche was some kind of a high abbot over a district of monasteries in Tibet, so you can expect a book of his talks to be some kind of esoteric and too profound for us surface-dwellers.

If it's esoteric, he's cleverly hidden that fact, and surface dwellers are being sucked in from all over the map. I've never seen so much good sense in so little space on the subject of meditation. As a book, it trends toward the very goal: singularity.

—SB

## Meditation in Action

Chogyen Trungpa  
\$8.95, 74 pp.

\$2.25 postpaid

from:  
Shambala Publications Inc.  
1405 5th Street  
Berkeley, California 94710

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The point is that whatever one is trying to learn, it is necessary to have first-hand experience, rather than learning from books or from teachers or by merely conforming to an already established pattern. That is what he found, and in that sense Buddha was a great revolutionary in his way of thinking. He even denied the existence of Brahms, or God, the Creator of the world. He determined to accept nothing which he had not first discovered for himself.

... He developed the creative side of revolution, which is not trying to get help from anyone else, but finding out for oneself. Buddhism is perhaps the only religion which is not based on the revelation of God nor on faith and devotion to God or gods of any kind. This does not mean that Buddha was an atheist or a heretic. He never argued theological or philosophical doctrines at all. He went straight to the heart of the matter, namely, how to see the Truth. He never wasted time in vain speculation.

If we are meditating at home and we happen to lie in the middle of the High Street, we cannot stop the traffic just because we want peace and quiet. But we can stop ourselves, we can accept the noise. The noise also contains silence. We must put ourselves into it and expect nothing from outside, just as Buddha did. And we must accept whatever situation arises. As long as we never retreat from the situation, it will always present itself as a vehicle and we will be able to make use of it. As it is said in the Scriptures, "The Dharma is good at the beginning, the Dharma is good in the middle and the Dharma is good at the end." In other words the Dharma never comes out-of-date, because fundamentally the situation is always the same.

The whole point is to cultivate the acceptance of everything, so one should not discriminate or become involved in any kind of struggle. That is the basic meditation technique, and it is quite simple and direct. There should be no deliberate effort, no attempt to control and no attempt to be peaceful. This is why breathing is used. It is easy to feel the breathing, and one has no need to be self-conscious or to try and do anything. The breathing is simply available and one should just feel that. That is the reason why technique is important to start with. This is the primary way of starting, but it generally continues and develops in its own way. One sometimes finds oneself doing it slightly differently from when one first started, quite spontaneously. This is not classified as an advanced technique or a beginner's technique. It simply grows and develops gradually.

Where there is an external person, a higher Being, or the concept of something which is separate from oneself, then we tend to think that because there is something outside there must be something here as well. The external phenomenon sometimes becomes such an overwhelming thing and seems to have all sorts of seductive or aggressive qualities, so we erect a kind of defence mechanism against it, failing to see that that is itself a continuity of the external thing. We try to segregate ourselves from the external, and this creates a kind of gigantic bubble in us which consists of nothing but air and water or, in this case, fear and the reflection of the external thing. So this huge bubble prevents any fresh air from coming in, and that is "I"—the Ego. So in that sense there is the existence of Ego, but it is in fact illusory.

Q. For meditation, would a student have to rid himself of Ego before he started, or would this come naturally as he is studying?

A. This comes naturally, because you can't start without Ego. And basically Ego isn't bad. Good and bad doesn't really exist anywhere; it is only a secondary thing. Ego is, in a sense, a false thing, but it isn't necessarily bad. You have to start with Ego, and use Ego, and from there it gradually wears out, like a pair of shoes. But you have to use it and wear it out thoroughly, so it is not preserved. Otherwise, if you try to push Ego aside and start perfectly, you may become more and more perfect in a rather one-sided way, but the same amount of imperfection is building up on the other side, just as creating intense light creates intense darkness as well.

## Meditation Cushions and Mats

Traditionally designed softness for your hard edges. —SB

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## A Hidden Wholeness

No book has convinced me so directly that the life of active contemplation can be utterly wholesome. Here are indisputable photographs by Merton and by John Howard Griffin (remember Black Like Me? The white who dyed himself black so he could understand...) photographs and some calligraphy by Merton that say something tough, pointed, and very healthy going on here that I don't understand.

—SB

## A Hidden Wholeness

Thomas Merton, John Howard Griffin  
1970; 147 pp.

\$15.00 postpaid

from:  
Houghton Mifflin Co.  
2 Park St.  
Boston, Mass. 02107

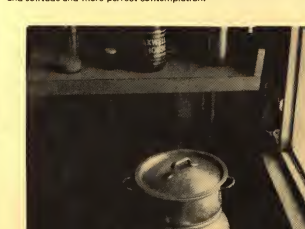
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Thomas Merton entered the Cistercian Abbey of Our Lady of L'Assumption in Trappist, Kentucky, on December 10, 1941, to begin his life as a Trappist monk.

Twenty-seven years later, to the day, on December 10, 1968, a few hours after addressing a religious conference near Bangkok, Thailand he died alone in his room from the effects of an accidental electric shock received when he touched a fan.

His religious life formed a single arc. From the beginning he sought to lose himself in God in the silence of Trappist contemplative life. Through all the intrusions of his celebrity as a writer and prophetic figure, that initial religious passion remained paramount and growing. At the end of his life he was in search of deeper solitude and solitude and more perfect contemplation.



Zafu \$5.95 Available in 5-6" height, or to order. Fabric is traditional black or brown.

Zabuton (mat for added height and ease on knees) \$6.95.

## On the Psychology of Meditation

If you're into meditation, but think Science has something to offer the world, you've probably tried to see what scientists have said about it. And been pretty disappointed. With few exceptions, they gibberly call it "self-hypnosis," and, having said the magic word that exorcises the mysterious, forget about it. The only book that presents the first scientific treatment of meditation that is really good. If you're a meditator and want your world-view expanded this will help. If you're a scientist and want your world-view expanded, this will do it.

Claudio Naranjo looks at the multitude of ways of meditating and finds some basic dimensions running through them. Robert Ornstein looks at meditative practices as results from a psychologist's view and finds similarities to some well-known psychological processes that make it clearer just how meditation works, even though the ultimate question of where it takes you is beyond books.

[Suggested and reviewed by  
Charley Tart]

## On the Psychology of Meditation

Claudio Naranjo, Robert Ornstein  
1971; 320 pp.

\$7.95 postpaid

from:  
Viking Press, Inc.  
225 Madison Ave.  
New York, N.Y. 10022

or WHOLE EARTH CATALOG

on the psychology of  
meditation



Aside from the difficulty arising from the esoteric nature of some practices, a fact that makes writing on techniques almost irrelevant, in the sphere of meditation that we are discussing, it is that the effectiveness of any practice seems to depend, more than on an other case on an extra-technical factor of "personal contagion."

The infectious nature of possession by devils throughout history is well established, and it is impressive to read documents such as those of the epidemic of Loudoun, showing how even apparently sane priests sent to perform exorcisms became affected by the prevalent state.

What is true in regard to unwanted devil possession is apparently as true with regard to states that are welcomed and cultivated. Among many peoples, trance is a collective phenomenon in which the state of the more experienced is believed to facilitate that of the novices. Among the Kung bushmen of the Kalahari desert, for instance, who understand the possessing entity not as a spirit but as an energy, originally given to man by God—the energy, also called a "medicine," is now maintained by direct transmission from man to man according to a ritual. Len who has studied the technique of the practicing cures spend much of their time implanting medicine into the bodies of their trainees.

Recall the phenomenon of habituation. A slight change in the input is enough to "dishabituate" and to return the stimulus to awareness. Similarly, slightly altering our usual "automatic" behaviors, such as lying shoes, driving cars, should return them again into awareness.

In Yoga itself there is a similar tradition called Karma Yoga. The attempt is to treat everyday activities as a sacrament and to give them full attention. This exercise performs the same function as "right-mindedness" or "self-remembering," and perhaps is a less extreme version of shikhan-taza.

Most schools within these traditions combine the two major kinds of awareness, exercises or meditations, and a half an hour or so twice a day of the "shutting down" meditation end as much as possible of the remainder of the day in a form of self-observation.

That concentrative meditation is a "turning off" of competing activity does seem quite clear. We recall in Anand's state of Yoga meditation that while in meditation the brains of the Yogins did not show any response to the external world. Also recall that the repetitive stimulation of the garland and by stabilized memory leads to a state equivalent to that of no external stimulation at all. The repetitive form of meditation involves a trick to turn off the nervous system, to turn off awareness of the external environment, to enter a state of "darkness," or the "void," or, in our previous metaphor, that of turning out the light of the sun.



The rabbits were the central project in Emmitt's scheme, but he had other things going too that he had worked at as he had the time, and strength. He had a worm pit going by one of the walls inside the barn. He'd built it when he first got his rabbits, filled it with manure and stocked it with five thousand red worms he'd ordered through the mail. A year later there were so many worms in it he was scooping them out by the pitch-fork full and planting them in the garden rows to go to work on the mulch of old hay. But as the garden expanded and the rabbit population increased, Emmitt wanted just more worms, and the extension of the pit was one of the projects he left unfinished when he died.

D.R. intended to finish that pit, and perhaps build another one along the facing wall.

It would not be possible to breed too many worms for the work he had in mind.

(continued)

Meditation  
Learning 423



## Light on Yoga

If you are into it already, and want probably the most complete *Hatha Yoga* book, get this book. It has over 600 pictures, 200 asanas (postures) and a warm guru-like introduction to get you straight.

[Reviewed by Merce]

## LIGHT ON YOGA

B.K.S. IYENGAR

with a foreword by  
YEHUDI MENCHUN

Over 600 pictures  
Illustrated in full color  
Over 400 illustrations

Light on Yoga  
B.K.S. Iyengar  
1965, 70, 342 pp.  
\$14.95 postpaid

from  
Shreehan Books Inc.  
67 Park Avenue  
New York, New York 10016  
or WHOLE EARTH CATALOG

Yoga is the method by which the restless mind is calmed and the energy directed into constructive channels. As a mighty river which when properly harnessed by dams and canals, creates a vast reservoir of water, prevents famine and provides abundant power for industry; so also the mind, when controlled provides a reservoir of peace and generates abundant energy for human uplift.

To make life healthy, happy and peaceful, it is essential to study regularly divine literature in a pure place. This study of the sacred books of the world will enable the sadhaka to concentrate upon and to solve the difficult problems of life when they arise. It will put an end to ignorance and bring knowledge. Ignorance has no beginning, but it has an end. There is a beginning but no end to knowledge.

Once the sadhaka has experienced the fulness of creation or of the Creator, his thirst (tṛṣṇā) for objects of sense vanishes and he looks at them never after with dispassion (vairāgya). He experiences no delight in heat or cold, in pain or pleasure, in honour or dishonour and in virtue or vice. He treats the two imposters—triumph and disaster—with equanimity. He has transcended the pull of the gunas and pairs of opposites. He has passed beyond the pull of the gunas and pairs of opposites. He has become a ganiṭa (one who has transcended the gunas). He is then free from birth and death, from pain and sorrow and becomes immortal. He has no self identity as he lives experiencing the fulness of the Universal Soul. Such a man, scorning nothing, leads all things to the path of perfection.

27. When one has mastered an asana, it comes with effortless ease and causes no discomfort. The bodily movements become graceful. While performing asana, the student's body assumes numerous forms of life found in creation—from the lowliest insect to the most perfect age—and he learns that in all these there breathe the same Universal Spirit—the Spirit of God. He looks within himself while practising and feels the presence of God in different asanas which he does with a sense of surrender unto the feet of the Lord.

## Kundalini: The Evolutionary Energy in Man

dear Jerry,  
the universe from the inside out,  
through the meditation efforts  
of an Indian government worker,  
a college failure,  
a story of personal contact  
with the cosmos,  
and what happens to a man  
when, unexpectedly,  
he is set apart from his friend,  
by a blinding flash  
of pure white enlightenment.

—jd

[Suggested by Sam Berchofz]

## Kundalini: The Evolutionary Energy in Man

Gopi Krishna  
1970, 252 pp.

\$6.50 postpaid

from:  
Shambhala Publications  
1409 5th Street  
Berkeley, California 94710

or WHOLE EARTH CATALOG



## The Yoga System of Health and Relief from Tension

If you do yoga every day, you'll feel better. An uncluttered hour and a half of Yog Bihadras' funky book will get you off... it has large print, adequate pictures, and makes you want to get out on the floor with it. A good book to begin with.

[Reviewed by Merce]

## THE YOGA SYSTEM OF HEALTH AND RELIEF FROM TENSION

The Yoga System of Health  
and Relief from Tension  
Yog Bihadras  
1957, 120 pp.

\$1.00 postpaid

from:  
Outlet Book Company  
419 Park Ave. 50  
New York, N.Y. 10016

or \$1.25 from

WHOLE EARTH CATALOG

When concentrating on an object it is best to begin slowly and concentrate for thirty seconds intensely rather than three minutes in a half-concentrated, disconnected fashion. Choose any object for the mind to fasten on and make it a pleasant one—a half-opened rose. Place it in front of you in a little vase on a level with your eyes, and think of nothing but its beauty, the soft imperceptible grating of the colours, the stalk, the thorns, and the leaf. Keep your mind on that rose until you could tell anyone every feature of the blossom, and eventually, even with your eyes closed, that rose will be so firmly imprinted on your mind that it will be as vivid for you as if you were still looking at it.

Regard the exercise as a kind of game, and have a shot at it at odd times of the day when you are waiting for a bus or for a meal. Do not waste that time by idle dreaming, but consciously direct your mind to some object, and, shortly, an admirable technique of mind-control will be established.

Place an acorn before you and gaze steadily at it, fixing it firmly in your mind. Know with certainty its attributes, as with the rose—it's shape, colour, and any markings you can discern. Then imagine the acorn in the ground and a root shooting from the base, and the first green leaf, and carry on the process to the complete tree. Learn to do this in a hurry, nothing to place them in a ring of comfortable position until you in your mind the acorn has become a great tree.

Meditation has a positive and negative pole, or, in other words, two extremes in its practice which must be avoided. A person who errs on the positive side, avoids the great middle path, develops an assertive inner nature, and takes pride in a false superiority of power.

The student who sees no difference in receptivity and surrender of the will meditates in a negative manner, leaving himself open to every passing force, desirable or not, instead of practising disciplined reception.

During one such spell of intense concentration I suddenly felt a strange sensation below the base of the spine, at the place touching the seat, where I sat cross-legged on a folded blanket spread on the floor. The sensation was so extraordinary and so pleasing that my attention was forcibly drawn towards it. The moment my attention was thus unexpectedly withdrawn from the point on which it was focused, the sensation ceased. Thinking it to be a trick played by my imagination to relax the tension, I dismissed the matter from my mind and brought my attention back to the point from which it had wandered. Again I fixed it on the lotus, and as the image grew clear and distinct at the top of my head, again the sensation occurred. This time I tried to maintain the focus of my attention and succeeded for a few seconds, but the sensation extending upwards grew so intense and was so extraordinary, as compared to anything I had experienced before, that I was aware of myself my mind went towards it, and at that very moment it again disappeared. I was now convinced that something unusual had happened for when my daily practice of concentration was probably responsible.

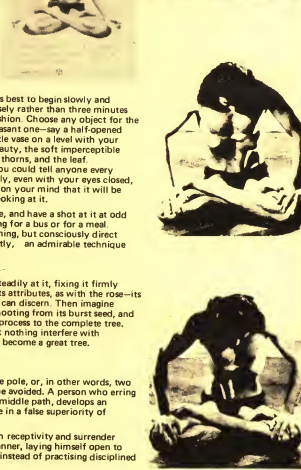
Entirely unprepared for such a development, I was completely taken by surprise, but regaining self-control instantaneously, I remained sitting in the same posture, keeping my mind on the point of concentration. The illumination grew brighter and brighter, and I experienced a rocking sensation and then felt myself slipping out of my body, entirely enveloped in a halo of light. It is impossible to describe the experience accurately. I felt the point of consciousness that was myself growing wider. I felt the point of consciousness that was myself growing wider surrounded by waves of light. It grew wider and wider, spreading outward while the body, normally the immediate object of my perception, appeared to have receded into the distance until I became entirely unconscious of it. I was now all consciousness, without any intuition, without any idea of a corporeal appearance, without any feeling or sensation coming from the senses, immersed in a sea of light simultaneously conscious and aware of every point, spread out, as it were, in all directions without any barrier or material obstruction. I was no longer myself, but I was accurate, no longer as I knew myself to be, a small point of awareness confined in a body, but instead was a vast circle of consciousness in which the body was but a point, bathed in light and in a state of exaltation and happiness impossible to describe.

After some time, the duration of which I could not judge, the circle began to narrow down. I felt myself concentrating, becoming smaller and smaller, until I again became dimly conscious of the outline of my body, then more clearly; and as I slipped back to my old condition, I became suddenly aware of the noises in the

street, felt again my arms and legs and head, and once more became my narrow self in touch with body and surroundings. When I opened my eyes and looked about, I felt a little dazed and bewildered, as if coming back from a strange land completely foreign to me. The sun had risen and was shining full on my face, warm and soothing. I tried to lift my hands, which always rested in my lap, one upon the other, during meditation. My arms felt limp and lifeless. With an effort I raised them up and stretched them then to enable the blood to flow freely. Then I tried to free my legs from the posture in which I was sitting, and to place them in a more comfortable position but could not. They were heavy and stiff. With the help of my hands I freed them and stretched them out, then put my back against the wall, reclining in a position of ease and comfort.

Under the action of a stronger current than that for which it was designed, any man-made mechanism, even a hundredth part as sensitive and intricate as the human frame is, would be wrecked or damaged immediately, but because of certain inherent qualities, developed by the human organism as a means of evolution, the sudden release of the serpent power, instead of the blood in the organs and the organs sound, is not attended by fatal results in favourable cases because of safety device already provided by nature to meet a contingency of this kind in individuals ready for the experience. Even in such cases it is essential that the energy be benignly disposed and that the subject take the necessary precautions to maintain the strength of the body and the balance of the mind during the subsequent period of inexpressible severe trial. How far I was endowed with a constitution suited for the great ordeal I cannot say, but being an utter stranger to the science, taken unaware without the requisite preliminary course of physical and mental discipline, and a prey to adversity, I was buffeted unceasingly for many years partly because of my ignorance and lack of sufficient strength and partly because of the extreme suddenness and rapidity of the extraordinary development.

I was destined to witness my own transformation, not comparable in any way to the great transfiguration in the past, but a point of results to the marvelous achievements of genius, but though simple in nature and ordinary in effect, a transformation never before experienced, all along by great physical and mental suffering. But what I witnessed and still witness within myself is so contrary to many accepted notions of science, that it must occur to many time-honoured dogmas of faith, and so antagonistic to many of the universally followed dogmas of civilization that when all I have experienced is proved experimentally, it must occur a far-reaching, revolutionary change in every sphere of human activity and conduct.

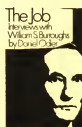


## The Job

Burroughs' domain is the interface of individual mind and social mind—control. When social controls become demented, suicidal, the individual must break from them and find his own health. This book is a discussion of the control-busting techniques Burroughs has explored. Scientology's E-meter, word-subversion, violence, doing nothing, tape recorders, amorphine, contradictory commands. All methods of seizing the social tools and turning them against themselves.

It's important research in a critical, invisible realm. My only carp would be Burroughs' assumption of crafty, subtle, efficient intellects behind society's controls... which describes Burroughs but hardly describes the tired men I've seen earnestly coping with the top jobs in the Pentagon and the Department of the Interior. Their main activity is trying not to fall over their own feet.

—SB



**The Job: Interviews**  
with William S. Burroughs  
David Oster  
1970 189 pages  
\$5.95 postpaid

from:  
Grove Press, Inc.  
214 Mercer St.  
New York, N.Y. 10012

or WHOLE EARTH CATALOG

## Aikido and the Dynamic Sphere

Aikido is the most recent and most brilliantly conceived of the Japanese martial arts. A superb fighting technique, it is scarcely interested in fighting—it doesn't even have matches, just training. You train to put your mind and body in the same place for once—the one point at your center of gravity. You train to acquire and direct Ki—energy (not strength, but coherent energy—when it's flowing you don't have to move). You train to blend with your opponent and use his energy to unhinge his attack. I find this book by the Americans to be far more useful for learning aikido than the numerous texts by Japanese students of the original master Morihei Ueshiba. The illustrations here are profoundly better than the usual photographs. They depict the mental image—which is the heart of aikido technique. An editor can use aikido, a general, an actor, a craftsman, a politician, a designer. What the body learns and practices becomes useful in any realm.

—SB

**Aikido and the Dynamic Sphere**  
A. Westbrook and O. Ratti  
1970, 375 pp.

\$8.50 postpaid or WHOLE EARTH CATALOG

## T'ai-Chi

I've only watched two people doing t'ai chi, one, an old man at sunrise, in front of a two-car garage, swooping and turning, the other, cackly oldton, in front of a two-car garage, slowly working it out on the front lawn in menlo park.

It is a beautiful dance with the cosmos personal movement, meditational motion, and maybe it can be learned from a book.

—jd

[Suggested by Jim Frierston]

**T'ai-Chi**  
Ching and Smith  
1967/69, 112 pp.

\$5.75 postpaid

from:  
Ching and Smith  
28 North Main  
Rutland, Vermont 05701

or WHOLE EARTH CATALOG

© 1978 The Ching and Smith Co., Inc.

"Nagireu necesse es. Viare no es necesse."

"It is necessary to travel. It is not necessary to live." These words inspired early navigators when the vast frontier of unknown seas opened to their sails in the fifteenth century. Space is the new frontier. Is the frontier open to youth? I quote from the *London Express*, December 30, 1968: "If you are a fit young man under twenty-five with lightning reflexes who fears neither in heaven or on the earth and has a keen appetite for adventure don't bother to apply for the job of astronaut." They want "cool dads" trailing wires to the "better half" from an aqualing. Doctor Paine of the Space Center in Houston says: "This flight was a triumph for the squares of this world who aren't hippies and work with slide rules and aren't ashamed to say a prayer now and then. It is the great adventure of space? These are men going to take the step into motherly utterly unthinkable in verbal terms? To travel in space you must leave the old verbal garbage behind: God talk, country talk, religion talk, love talk. You must learn to exist with no religion no country no allies. You must learn to live alone in silence. Anyone who prays in space is not there.

The last frontier is being closed to youth. However there are many roads to space. To achieve complete freedom from past conditioning is to be in space. Techniques exist for achieving such freedom. These techniques are being concealed and withheld. In *The Job* I consider techniques of discovery.

Why then does the subject when he is trying most desperately to make a good impression make the worst impression possible? Because he also has the goal to make a bad impression which operates on an involuntary automatic level. This self-destructive goal is such a threat to his being that he reacts against it. He may be conscious or partially conscious of the negative goal but he cannot confront it directly. The negative goal forces him to react. The Reactive Mind consists of goals so repulsive or frightening to the subject that he compulsively reacts against them and it is precisely this reaction that keeps these negative goals in operation.

We take karate and Aikido training in the schools scattered through large cities of the world, our Scientology training at Scientology centers. Other courses are provided by a network of institutes and foundations often short-lived. The training is often interrupted. Three months of karate then Scientology take up all my time and just before the advanced Scientology courses I am shipped to Cairo for an intensive course in Egyptian hieroglyphs. This center is closed down by the government. After that there is a weapons course financed by a rightist billionaire in East Texas where we learn to use every weapon from a crossbow to a laser gun, a seminar in black magic of Africa sponsored by an ethnologist institute in London that is always short of funds, a volunteer experiment in prolonged sense

For teachers near you, get in touch with:



American Aikido Federation  
142 West 18th St.  
New York, N.Y.

Control the Attack by Leading it.



Your own Centre must become the center of your attack's action as well. The Centre is not restricted in aikido, as we have indicated, to your personal dimension. If a man attacks you, he has lost his own point of independence and balance by the very irrationality of that act; and you must substitute your own Centre in an attempt to return the situation to normal. Thus the attacks, you evade; he plunges into a vacuum, you lead and guide him around your own Centre and neutralize his attack.

How should a novice begin his training in T'ai-chi? He should relax completely. The air is to flow every bone and muscle of the body wide open so that the chi may travel unobstructed. Once this is done, the chest must be further relaxed and the chi made to sink to the navel. After a time the chi will be accumulating for mass integration in the navel, from where it will begin to circulate throughout the body.



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withdrawal set up the U.S. Navy which ended in a Congressional investigation of brainwashing, a free fall club in North Dakota, skin diving and just when I am getting used to the Aquagum we are thrown out of Jellyworld where the program is and I do a Yoga stint in Northern India.

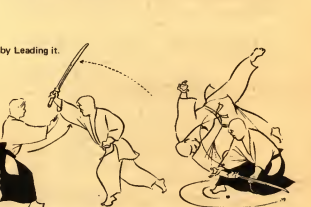
The aim of academy training is precisely decontrol of opinion, the students being conditioned to look at the facts before formulating any verbal patterns. The initial training in non-chemical methods of expanding awareness would last at least two years. During this period the student would be requested to refrain from all drugs including alcohol since bodily health is essential to minimize mental disturbance. After basic training the student would be prepared for drug trips to reach areas difficult to explore by other means in the present state of our knowledge.

The program proposed is essentially a detoxification from inear fear and inner control, a liberation of thought and energy to prepare a new generation for the adventure of space. With such possibilities open to them I doubt if many young people would waste their time in the Remedial junk we see right here in junky flesh on this earth where Shit is open all right. You can't make space in an aqualing of junk.

the more people we can get working with tape recorders the more useful experiments and extensions will turn up why not give tape recorder parties every guest arrives with his recorder and notes of what he intends to say at the party recording what others say to him it is the height of rudeness not to record when addressed directly by another tape recorder and you can't say anything directly to me to record it first the coolest old tape worms never talk direct

After the baptism of silence the student moves with ease in the soundless medium but words are at his disposal when he needs them to be used with absolute precision.

Society makes all these criminals quail deliberately, these great concentration camps, where they dump people known as criminals. Many of them are psychopaths, that is, they are refractory to control. As soon as they become criminals, there will be no more trouble from them at all. They're right in that game of cops and robbers for life, in a concentration camp. But now they've begun extending this concentration camp, extending it and extending it by making more laws and making more people criminals, if all the laws were extended, they'd have practically everyone in the concentration camp, and everyone else would be necessary to guard them. They have reached an impasse; they must either admit that the whole thing is a farce and that laws are not meant to be enforced, or change them, or enforce them.



A blow may be delivered to your head (attack no. 13, shomen uchui). You will pivot and kneel down, so that you are facing the same direction as your opponent. Your arm will not be "black" in the sense of stopping his motion, but will be extended so as to protect yourself. At the same time you will guide his motion via his wrist or even sleeve from the inside, lead the hand, and then forward and then down. This can be accomplished almost without touching him.

There is no pulling, no dragging; it is just a smooth, simple, circular lead, synchronized perfectly with your attacker's own movements. It is blended dynamically with them and, therefore, almost unnoticed until he is in flight. He falls, but yet does not know precisely how he came to fall.



He also intended to go on dismantling the old house, to tear as much of it down for salvage as he possibly could before the coming winter's rains. Emmitt had only taken boards off as high as he could comfortably reach. He had stripped the weather boarding from the lower portions of the house on three sides. With a ladder D.R. would be able to get three times as much lumber as Emmitt had before he even touched the inside of the house. Emmitt had worked the lumber with a hammer and a wrecking bar, pulling out the nails and trimming up their edges with a saw. As he cleared the boards he had stacked them neatly in a corner of the barn. He had scavenged more lumber than he needed for his hutches. It wasn't clear what he had intended to do with the extra, but D.R. knew exactly what his own intentions were: he was going to remodel two of the stalls into a weather-light room, and live in it with winter.

Two rooms, if he could get them done.

And three rooms, if Estelle would come to live there with him, and help him with the work.

If Estelle would come, they would convert one whole and of the barn into a house, and live there together by the rabbits and the worms and near the garden. They would get up early every morning and work to improve their place. If they wanted to, they could have a hundred hutches full of rabbits, and a million worms a year. They could have five hundred hutches full, and ten million worms at work in their manure if they wanted to. If they wanted to, they could have a thousand hutches, one standing on every five square yards of that ruined mountain, shitting pure worm food onto the ground, creating perfect lettuce beds and comfrey stands and alfalfa fields galore.

They could do that if Estelle would come to live with him. They'd do all of that, and more.

If he came.

Calisthenics  
Learning

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## Be Here Now

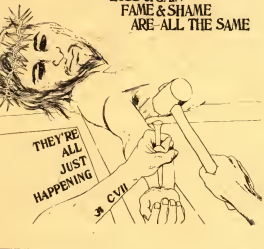
Baba Ram Dick Dass Alpert has put together for us a very tasty hot fudge Sunday school (you know how hot fudge sundaes came about). It seems this little princess once demanded of the King's cooks something absolutely new to titillate her jaded palette: "It must be both black and white and hot and cold," she pouted. Pow! They socked a sundae to her. . . J Be Here Now is western in flavor, Eastern in content and sprinkled generously with the kernels of wisdom gleaned from ten years of dedicated nutcracking. Rum Dum (as his father calls him) has over the past four or five years become a true disciple of Vedanta and Yoga, and in his box we get it all: a history, a cookbook, a bibliography and a collection of daily meditations hung together in beautiful layout. Though the book is clearly founded in Eastern Philosophy, Rum Dum's background is tennis shoes and bikes and cars and trying to get laid and gaining prestige, just like all of us, so his meditations are as familiar to us as our own bathwater. He makes the Message of the East comfortable for our coffee table studies with his references to drugs we have all taken, books we all have read and flashes we all have experienced. This warmth and dedication makes the Lama Foundation the most personal and reliable-seeming school of psychedelic thought that has so far surfaced in our hemisphere, and Baba Ram Dass shines forth from the box looking as though he may be our first true guru.

[Reviewed by George de Alth]

Be Here Now from:  
Baba Ram Dass, Lama Foundation Crown Publishers, Inc.  
1971, 400 pp. #19 Park Ave., South  
\$3.33 postpaid New York, N.Y. 10016  
or WHOLE EARTH CATALOG

DO YOU THINK  
THAT WHEN CHRIST IS LYING THERE  
AND THEY'RE NAILING THE NAILS IN  
HE'S SAYING, "OH MAN, DOES THAT HURT?" HE'S  
PROBABLY LOOKING AT THE GUY WHO'S NAILING HIM  
WITH  
**ABSOLUTE COMPASSION**  
HE DIGS WHY THE CAT'S DOING IT.  
WHAT HE'S STUCK IN  
HOW MUCH DUST COVERS HIS EYES  
WHY HE'S GOT TO BE DOING IT  
THAT'S THE WAY IT IS  
HE SAID THE NIGHT BEFORE:  
"WELL, TOMORROW IS THE BIG TRIP.  
YEAH—RIGHT—THESE ARE THE NAILS  
WOW! LOOK AT THAT!"  
AM I THE WHO IS BEING PAINED?

NO! THAT'S THE THING, ONCE YOU KNOW THAT  
THEN: PLEASURE & PAIN  
LOSS & GAIN  
FAME & SHAME  
ARE: ALL THE SAME



## The Hero With A Thousand Faces

Myths and man's dreamworld have, for the past fifty years or so, been the objects of various alchemical attempts at synthesis, about the time I got convinced that screaming green wienie have some larger context than madison avenue, someone else denies the organic connection between them.  
the hero with a thousand faces is one of those syntheses. it's about the monomyth, campbell traces his hero right out into the void.

—jd

[Suggested by George & Laura]

**426** Myth Learning



## The Base Camp

The base camp includes all the living facilities with the exception of the hermitage rooms or buildings. Participants in the base camp follow a schedule as follows:

- 5:30 Rise
- 5:45-6:30 Group silent meditation.
- 6:30-7:00 Chanting, reading aloud, singing.
- 7:00-9:00 Dancing, asanas, pranayama, breakfast, getting the children to school, clean up, etc.
- 9:00-12:00 Karma yoga (work) period—assignments for an entire week are usually made once a week on Saturday morning.
- 12:00-2:00 Bringing food and supplies to hermit and preparing and having prasada (consecrated food), taken in silence. Then rest or relaxation and clean-up.
- 2:00-4:00 Karma yoga period.
- 4:00-5:30 Group study, and exercises in consciousness.
- 5:30-6:30 Pranayama, asanas, preparing evening food, etc.
- 6:30-8:00 Evening prasada (pranayama) plus clean-up and relaxation, reading, etc.
- 8:00-9:00 Group meditation and chanting and singing.

By assigning the karma yoga tasks over a period of a week you can use the karma yoga period in a fluid fashion. One person's karma yoga, for example, might include milking goats, making cheese, weaving, picking the kids up at school, getting the car fixed, etc. Also a person may design his schedule to use a few of the morning karma yoga periods for personal study or meditation. The use of these periods is largely dependent upon the number of participants, and the amount of man-hours required for right livelihood and community maintenance. Time not spent in fulfilling assignments should be used on inner work (study, meditation, asanas, singing kirtan).

Most activities can be carried on in silence. Groups working together on a shared project such as gardening, building, etc. can either do these tasks in silence or do mantra during the work. Silence is an important part of the work. Formal discussions at the base camp of the hermitage experiences of the participants can be useful. Gossip, small talk, and hanging out... have a limited value in breaking through the illusion.

It is well to realize that the relationships in this community are not the dominant concern. Ideally, personality falls away in the common endeavor. If you want at all costs to hold onto your personality, don't join a spiritual community... because no one is going to be interested. Interpersonal matters are dealt with only to the extent that they are disruptive (i.e., capture the consciousness of the group or some participants). Such matters can be dealt with at a group meeting if necessary... but the moment the group gets bogged down in heavy melodrama... it is well to call a meditation interlude until everyone can find a center again. Melodrama sucks us in again and again, but diminishes in power if actively thwarted.



## THE HERO

## WITH A

## FACES

The Hero With A Thousand Faces  
Joseph Campbell  
1970, 70, 416 pp.

\$3.95 postpaid

from:  
The World Publishing Company  
2231 West 110th Street  
Cleveland, Ohio 44102

or WHOLE EARTH CATALOG

## THIS WHOLE TRIP IS TALKING ABOUT IS FRAIGHT



THE MOST EXQUISITE PARADOX  
AS SOON AS YOU GIVE IT ALL UP  
YOU CAN HAVE IT ALL

HOW LONG AS YOU WANT POWER  
YOU CAN HAVE IT

THE MINUTE YOU DON'T WANT POWER  
YOU'LL HAVE MORE THAN YOU EVER DREAMED  
POSSIBLE

## WHAT A WEIRD THING!

AS LONG AS YOU HAVE AN EGO  
YOU'RE ON A LIMITED TRIP

YOU'RE ON A TRIVIAL TRIP THAT'S GOING TO LAST  
MAYBE WHAT? 60... SAY 70... MAYBE 80 YEARS  
AND PULL WITH FEAR OF ITS END  
TRYING TO MAKE ITS OWN ETERNITY.

WELL: IF I AM NOT SPEAKING  
IF I AM NOT WHAT I THOUGHT I WAS  
HOW DID I GET INTO THIS  
WHO AM I



FOR ONLY WHEN I KNOW WHO I AM WILL I KNOW WHAT IS  
POSSIBLE  
JES

"Did I ever tell you about the time that Tim and I..."

And he'd say, "Don't think about the past. Just be here now."

Silence.

And I'd say, "How long do you think we're going to be on this trip?"

And he'd say, "Don't think about the future. Just be here now."

I'd say, "You know, I really feel crummy, my hips are hurting..."

"Emotions are like waves. Watch them disappear in the distance on the vast calm ocean."

He had just sort of wiped out my whole game. That was it—that was my whole trip—emotions, and past experiences, and future plans. I was, after all, a great story teller.

So we were silent. There was nothing to say.

## IN GOD WE TRUST



It is the business of mythology proper, and of the fairy tale, to reveal the specific dangers and techniques of the dark interior way from tragedy to comedy. Hence the incidents are fantastic and "unreal": they represent psychological, not physical, triumphs. Even when the legend is of an actual historical personage, the deeds of victory are rendered, not in lifelike, but in dreamlike figurations: for the point is not that such-and-such could be done on earth, this other, more important, primary thing had to be brought to pass within the labyrinth that we all know and visit in our dreams. The passage of the mythological hero may be overground, incidentally; fundamentally it is inward—into depths where obscure resistances are overcome, and long lost, forgotten powers are reawakened, to be made available for the transmutation of the world. This deed accomplished, life no longer suffers hopelessly under the terrible mutilations of ubiquitous disaster, battered by time, hideous throughout space; but with its horror visible still, its cries of anguish still tumultuous, it becomes penetrated by an all-sufficing, all-sustaining love, and a knowledge of its own unconquered power. Something of the light that blazes invisible within the abysses of its normally opaque materiality breaks forth, with an increasing upsurge. The dreadful mutilations are then seen as shadows, only, of an immanent, imperishable eternity: time yields to glory; and the world sings with the prodigious, angelic, but perhaps finally monotonous, siren music of the spheres. Like happy families, the myths and the worlds redeemed are all alike.

## The King and the Corpse

I know of no better myth-telling than this, and no better myths. You've got Abu Kaseb's Slippers, and then Conn-ed and John Golden-Mouth, and four romances from King Arthur that take deeper turns than T. H. White, the King and the Corpse, the price, the ancient Hindu Romance of the Goddess, and the involuntary creation. Collected by Heinrich Zimmer, edited by Joseph Campbell. There's few books with such a blend of extravagance and intelligence, and none that come so close to the heart of education. —SR

(Suggested by Jim Fadiman)

## The King and the Corpse

Heinrich Zimmer; Joseph Campbell, ed.

\$4.80; 338 pp.

\$7.50 postpaid

From: Princeton University Press  
Princeton, N. J. 08540

or WHOLE EARTH CATALOG

THE KING AND THE CORPSE



That night, in the bed, Sir Gawain could not at first bring himself to turn and face her unappearing snout. After a little time, however, she said to him: "Ah, Sir Gawain, since I have wed you, show me your courtier in bed. It may not be rightfully denied. If I were fair, you would not behave this way; you are taking no heed of my seductions. For Arthur's sake do kiss me at least. I pray you, do this at my request. Come, let us see how quick you can be!"

The knight and lady nephew of the king accepted every bit of his courage and kindness. "I will do more," he said in all gentleness and grace, "I will be as faithful as I can, and as I am turned around now, and he saw her to be the fairest creature that ever he had seen without measure.

She said: "What is your will?"

"Ah, Jeshu! he said, "what are ye?"

"Sir, I am your wife, securely, why are ye so unkind?"

"Ah, lady, I am to you, I did not know. You are beautiful in your courtier in bed. It may not be rightfully denied. If I were fair, you would not behave this way; you are taking no heed of my seductions. For Arthur's sake do kiss me at least. I pray you, do this at my request. Come, let us see how quick you can be!"

"Sir," she said, "my beauty will not hold. You may have me, but only for half the day. And so it is a question, and you must choose whether you would have me fair at night and foul by day before all men's eyes, or beautiful by day and foul at night."

"Alas," replied Gawain, "the choice is hard. To have you fair at night and no more, that would grieve my heart; but I should decide to have you fair by day, then at night I should have a scabrous head. Fair would I choose the best, yet know not what in your courtier I shall say. My dear lady, let it be as you would have it; I rest the choice in your hand. My body and goods, my heart and all, is yours to buy and sell; that I avow before God."

"Ah, granerous, courteous knight!" said the lady. "Mayst thou be contented with all things in the world, for now I am released from the enchantment and thou shalt have me fair and bright both night and day."

The involvement of the gods in the web of their own creation, so that they become, like Abu Kaseb, the harried victims of their creatures, entangled in nets of not quite voluntary self-manifestation, and then dogged by the knowing laughter of their own externally reflected inner judgment: this is the miracle of the universe. This is the tragicomic romance of the world. The gods, the fairy powers, are always in danger of self-enchantment. Like the youth Narcissus, they become fixed to their own reflected images—momentarily reluctant to pass with the passing of time, and critically in need of the shocking, shattering fit of the redemptive catastrophe. Man is the little world creator; God, the great Each, surrounded by the fragments of his own mirrored deities, Selves of all Unfolds. And the last power that enchants them most is ever the great goddess, Mitya, self-delusion, the supreme creator of all the worlds.

Brahmā, sinking still further into the limpid darkness of his own inner, struck a new depth: suddenly the most beautiful dark woman sprang from his vision, and stood naked before everyone's gaze.

She was Dawn, and she was radiant with vivid youth. Nothing like her had ever appeared among the gods; nor would her equal ever be seen, among men, in the depths of the waters in the jeweled palaces of the serpent queens and kings. The billows of her black hair were glimmering like the feathers of a peacock, and her clothes were curving like the wings of a bird. She was Love. Her eyes, like dark lotus calyces, had the alert, questioning gleam of the frightened gazelle; and her face, round as the moon, was like a purple lotus bud. Her sweet deep breaths with their two dark points were enough to infatuate a saint. Trim as the shaft of truth of elephants, she was glowing with little delicate pearls of perspiration. And when she stood forth in the midst of her enraptured audience, she seemed about them, in uncertainty, then broke into a soft rippling laugh.

## The Masks of God

Want to grab history while reading mythology? Want to understand for the first time why those crazy Mayans and other South American civilizations used "Christian" symbols, attributed by European so-called Christians, came calling sword and cross, to be works of the Devil? Want to see why Sumner and Egypt and Mexico are so similar? Want to really furginate your fancy with the Mother Goddess and understand all the moxy? Want to understand why the patriarchism of Judaism drives a woman nuts if she's nothic at all, and why those paleolithic hunters may have had something important to say about sex experience and a coming to an understanding? Want to hear who said the voice of the Universe is as gentle as a woman? Want to really say forth into the world of the spirit, in other words, to really dig deep where Lewis Mumford says it's at: humanity's penchant for dreaming?

When you come right down to it, imagination really seems to be the power we differ from our furry and feathered fellows because we dream of things that are not and of things that never were. We believe, and in our believing bring madness and the sublime into reality.

Get Joseph Campbell and blow your preconceptions. You'll never see yourself the same again.

(Reviewed by J. A. Pollard)

## THE MASKS OF GOD

Joseph Campbell

Primitive Mythology

569; 504 pp.

\$3.25 postpaid

Oriental Mythology

1962; 561 pp.

\$3.75 postpaid

Occidental Mythology

1964; 564 pp.

\$3.75 postpaid

Creative Mythology

1968; 730 pp.

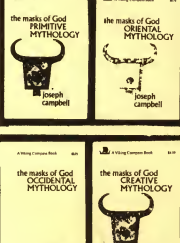
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or WHOLE EARTH CATALOG



Primitive Mythology

Gawain, on the other hand, was one who had spent his life not posing in a lone unreared, conferred upon by anointment, but in quest of a goal, for the sake of a deep desire.

After a year, not days—he was transfixed, established in his own true center, and knew exactly where he stood. She was, again, the bereaved Grief. But he was no toy king, far past their, into the no fear, either of man or of spirit, that could put him off his course or freeze him to a halt. His trials were proper to his own life and he was consequently their match; hence, at one with his Lady Guinevere at peace with her; and in the fair castle of love, the master of his world.

It remained only to make peace with the world beyond the broad stream. . . .

Sitting chatting with his grandmother at the window, Gawain with a start of joy looked on the meadow on the other shore the first of Arthur's host arriving with banners, colors, spears, and immediately setting up pavilions. With love in his heart, tears in his eyes, he welcomed, then ordered all his own castle knights—his knights and ladies, ladies and pages—to make ready for their own banners and tents to cross and welcome his own castle. Arthur and his queen introduced to Arthur, the king's mother, his sister, his sister, and the sisters of Gawain. All kissed and laughed, wept and laughed and kissed again. Moreover, many a knight who had been mourning Gawain's death came smiling into his hall. But the seneschal knee only murmured, "God surely does work wonders! Where did Gawain get all these guests?"

Next day a third host, that of Grandfather, arrived, and Gawain then rode forth onto a broad plain, alone, for exercise, where he saw a lone knight galloping his way, wearing arm rerder than rubies. . . .

Humor is the touchstone of the truly mythological as distinct from the more literal-minded and sentimental theological mood. The gods are icons are not ends in themselves. Their entertaining myths transport the mind and spirit, not so, but far past their, into the yonder void; from which perspective the more heavily freighted theological dogmas then appear to have been only pedagogical lures: their function, to cart the uninitiated intellect free from its coarse clutter of facts and events to a comparatively rarefied zone, where, as in a final, all existence is reduced to a single, essential truth—may at last be seen transmuted into the semblance of a lightly passing, recurrent, mere childhood dream of bliss and grief. "From one point of view all those divinities exist," a Tibetan lama recently replied to the question of an understanding Occidental visitor, "from another they are not real." This is the orthodox teaching of the ancient Tantras. "All of these visualized deities are but symbols representing the various things that occur on the Path";

The course of the world runs away, but therewith it goes directly to its goal. The catastrophe of the previously unforeseen is what breaks the forward flow, and the more forward the catastrophe has come to pass it appears to be what was intended all the while. For creative in a deeper way than the planning creative spirit supposes. It transforms the situation, forces an alteration on the creative spirit, and throws it into a play that carries it beyond itself. It is this, that is to say, really and properly play, and into a play that entrains the entirety of creation. The planner, the watcher, is compelled to become the endurer, the sufferer. Such a metamorphosis into the opposite, into the absolutely alien, is what throws the knots that reticulate the net of the living whole and mesh the individual alive into the fabric.

Shiva's visage became radiant with joy. In the presence of all the Holy Ones he became absorbed into intense contemplation, then he permitted himself to sink to the floor, legs crossed, shut his eyes, and sank into his being to the depth of the Being Sublime. His mind began to glow with the fire of the innermost vision. His presence became dazzled. And the moment he reached quietude in this immersion, Vishnu's Mitya fell away from him, and his entire body burst into flame. He perceived that even his own hosts were unable to bear the blaze. Vishnu passed into him, poured in him as the pure light of Heaven, and disclosed within Shiva's body, to the eye of his inner contemplation, the whole lotus-spectacle of creation and the procession of the world. Blatant and serene, beyond the senses and their universes of distinctions, alone and pure, beholding everything, the abstracted one experienced within his own being the Being Supreme, that Substratum of all Unfoldments. 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## Chuang Tzu: Basic Writings

a great long string of solid crystal fortune cookies

-jd

## Chuang Tzu: Basic Writings

Translated by Burton Watson  
1956, 66, 148pp.

\$2.25 postpaid

from  
Columbia University Press  
526 West 113 Street  
New York, N.Y. 10025

or WHOLE EARTH CATALOG

Your life has a limit but knowledge has none. If you use what is limited to pursue what has no limit, you will be in danger. If you understand this and still strive for knowledge, you will be in danger for certain! If you do good, stay away from fame. If you do evil, stay away from punishments. Follow the middle, go by what is constant, and you can stay in one piece, keep yourself alive, look after your parents, and live out your years.

Cook Ting was cutting up an ox for Lord Wen-hui. At every touch of his hand, every heave of his shoulder, every move of his feet, every thrust of his knee—zip! zop! he sliced the knife along with a zing, and all was in perfect rhythm, as though he were performing the dance of the Mulberry Grove or keeping time to the *Ching-shou* music.

"Ah, this is marvelous!" said Lord Wen-hui. "Imagine skill reaching such heights!"

Cook Ting laid down his knife and replied, "What I care about is the Way, which goes beyond skill. When I first began cutting up oxen, all I could see was the ox itself. After three years I no longer saw the whole ox. And now—I go it by spirit and don't look with my eyes. Perception and understanding have come to a stop and spirit moves where it wants. I go along with the natural makeup, strike in the big hollows, guide the knife through the big openings, and follow things as they are. So I never touch the smallest ligament or tendon, much less a main joint.

"A good cook changes his knife once a year—because he cuts. A mediocre cook changes his knife once a month—because he hacks. I've had this knife of mine for nineteen years and I've cut thousands of oxen with it, and yet the blade is as good as though I had just come from the grindstone. There are spaces between the joints, and the blade of the knife has really no thickness. If you insert what has no thickness into such spaces, there isn't a plenty of room—more than enough for the blade to play about in. That's why after nineteen years the blade of my knife is still as good as when I first came from the grindstone.

"However, whenever I come to a complicated place, I size up the difficulties, tell myself to watch out and be careful, keep my eyes on what I'm doing, work very slowly, and move the knife with the greatest subtlety, until—flop! the whole thing comes apart like a clod of earth crumbling to the ground. I stand there holding the knife and look on, completely satisfied and reluctant to move on, and then I wipe off the knife and put it away."

Chuang Tzu and Hui Tzu were strolling along the dam of the Hao River when Chuang Tzu said, "See how the minnows come out and dart around where they please! That's what fish really enjoy!"

Hui Tzu said, "You're not a fish—how do you know what fish enjoy?"

Chuang Tzu said, "You're not I, so how do you know I don't know what fish enjoy?"

Hui Tzu said, "I'm not you, so I certainly don't know what you know. On the other hand, you're a fish—don't you know what fish—so that still proves you don't know what fish enjoy."

Chuang Tzu said, "Let's go back to your original question, please. You asked me how I know what fish enjoy—so you already knew I knew it when you asked the question. I know it by standing here beside the Hao."



## The Secret of the Golden Flower

the way it reads to me:  
pass beyond the little old man  
sitting on  
that ledge of awareness  
on which  
you watch yourself making love,  
become the little old man,  
split him a few times,  
and realize that,  
because all this is possible,  
the light from the golden flower  
dissolves duality  
into the one.

-jd

The Secret of the Golden Flower  
translated by Richard Wilhelm  
1962, 149 pp.

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Harcourt Brace and Jovanovich, Inc.  
757 Third Avenue  
New York, New York 10017

or WHOLE EARTH CATALOG



Master Lu-Tzu said, When there is a gradual success in producing the circulation of the light, a man must not give up his ordinary occupation in doing it. The ancients said, When occupations come to us, we must accept them; when things come to us, we must understand them from the ground up. If the occupations are properly handled by correct thoughts, the light is not scattered by outside things, but circulates according to its own law. Even the still invisible circulation of the light gets started this way; how much more, then, is it the case with the true circulation of the light which has already manifested itself clearly.



One looks with both eyes at the tip of the nose, sits upright and in a comfortable position, and holds the heart to the center in the midst of conditions. In Taoism it is called the yellow middle, in Buddhism the center of the midst of conditions. The two are the same. It does not necessarily mean the middle of the hand. It is only a matter of fixing one's thinking on the point which lies exactly between the two eyes. Then all is well. The light is something extremely mobile. When one fixes the thought on the mid-point between the two eyes, the light streams in of its own accord. It is not necessary to direct the attention especially to the central castra. In these few words the most important thing is contained.

## The Tibetan Book of the Great Liberation

toward knowing the mind  
(talking to yourself)  
and the liberation of realization,  
nirvana,  
oneness with voidness,  
together,  
now,  
and the evaporation of karma,  
poof.

-jd

(Suggested by Sam Bercholz)

The Tibetan Book of the Great Liberation  
from:  
W.Y. Evans-Wentz, editor  
1969, 261 pp.  
Oxford University Press  
200 Madison Avenue  
New York, New York 10016

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## THE TIBETAN BOOK OF THE GREAT LIBERATION

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In the process of meditating introspectively upon the aphoristic teachings concerning the One Mind, the disciple will inevitably come face to face with the age-old problem of what man is. He will intuitively ask himself: Why am I? What am I? Am I a something, a self, a soul, eternally separate and different from each of the countless myriads of similarly constituted beings I see round about me in various states of existence? Is the glorious world of appearances real? Are all these inanimate objects and all these living, breathing creatures, in the eyes of which I find myself, real? Or are they, as the Buddhas declare, no more than the content of a karmic mirror, as the stuff composing the dreams of life? When the truth begins to come from within, very fleetly at first, like the consciousness of a man awakening from the torpor of a drugged sleep, or like the first traces of dawn coming forth in an eastern sky, the disciple will realize gradually that only by transcending the realm of separateness and attaining super-consciousness of the immutable as-one-mind of all things, organic and inorganic, can the age-old problem be solved. The more the disciple meditates upon what the self has in common with other selves, the more he will discover the impersonal self common to all selves. Thence he will reach the conclusion that if one and the same factor is the core of each individual's selfhood, no individual in its true essence had individuality. There would be nothing like my self; there would only be the Self.

The One Mind being verily of the Voidness and without any foundation, one's mind is, likewise, as vacuous as the sky. To know whether this be so or not, look within thine own mind. Being of the Voidness, and thus not to be conceived as having beginning or ending, Self-Born Wisdom has in reality been shining forever. Like the Sun, essentially unborn, to know whether this be so or not, look within thine own mind.

Being merely a flux of instability like the air of the firmament, objective appearances are without power to fascinate and fetter. To know whether this be so or not, look within thine own mind. All appearances are verily one's own concepts, self-conceived in the mind, like reflections seen in a mirror. To know whether this be so or not, look within thine own mind.

Arising of themselves and being naturally free like the clouds in the sky, all external appearances verily fade away into their own respective places. To know whether this be so or not, look within thine own mind.

## The Realization and the Great Liberation

Nothing save mind is conceivable. Mind, when uninhibited, conceives all that comes into existence. That which comes into existence is like the wave of an ocean. The state of mind transcending over all dualities is Liberation. It matters not what name may carelessly be applied to mind; truly mind is one, and apart from mind there is naught else. That Unique One Mind is foundations and rootless. There is nothing else to be realized. The Non-Created is the Non-Visible.

By knowing the invisible Voidness and the Clear Light through not seeing them separately—there being no multiplicity in the Voidness—one's own true mind may be known, yet the Truthness itself is not knowable.

Mind is beyond nature, but is experienced in bodily forms. The realization of the One Mind constitutes the All-Deliverance. Without mastery of the mental processes there can be no realization.

Similarly, although sesame seed is the source of oil, and milk the source of butter, not until the seed be pressed and the milk churned do the oil and butter appear.

Although sentient beings are of the Buddha essence itself, not until they realize this can they attain Nirvana.

Even a coward (or an illiterate person) may by realization attain Liberation.

## Zen Mind, Beginner's Mind

Suzuki Roshi says he prefers to work with American students because they are such total earnest beginners, and that is an advantage in the Zen business. Roshi is a remarkable person. During World War II in Japan he was a pacifist — unheard of. When the Americans came in the people in his town wanted to quickly tear down a war memorial statue they had; Roshi said don't do it, the Americans won't mind (they probably didn't even notice). Americans did notice during construction of the Tassajara Zen Center when the students found that their tiny Roshi could move as powerfully and gracefully with huge boulders as he could with obstacles to understanding. This book is a nicely edited transcription of words Suzuki Roshi spoke to a beginning Zen group in a Los Altos garage.

**Zen Mind, Beginner's Mind**  
Suzuki Roshi, (Trudy Dixon, ed.)  
\$470, 134 pp.

\$150 postpaid

from:  
John Weatherhill, Inc.  
720 5th Avenue  
New York, N.Y. 10019

or WHOLE EARTH CATALOG

But perfect freedom is not found without some rules. People, especially young people, think that freedom is to do just what they want, that in Zen there is no need for rules. But it is absolutely necessary for us to have some rules. But this does not mean always to be under control. At long as you have rules, you have a chance for freedom. To try to obtain freedom without being aware of the rules means nothing. It is to acquire this perfect freedom that we practice zazen.

## Galton's Walk

Associations, the mind's incessant ticking. You might get free of associations by investigating them, as this book relentlessly does.

I recall a jazz musician who kept seeing a little black dog walk by in front of him. "There he goes again," he would say. It never occurred to anybody that he was onto something.

—SB

Galton's Walk celebrates the Galton who invented the method of free association, and who first used it as he "walked leisurely along Pall Mall, a distance of 450 yards," taking careful note of all the thoughts associated with each object he saw. From that beginning Galton moved to word associations, and concluded his observations with the remark that "our working stock of ideas is narrowly limited," and that "the mind continually recurs to them in conducting its operations."

The important word here is "recurs," for it was this idea that fired Herbert Crovis's imagination. A basic, tractable fact of psychology, he points out, is the fact that everything recurs. It is well that it is so, for a world in which every experience was novel could hardly support intelligent life. From such basic facts, so obvious that they are easily overlooked, a scientist begins.

William James took the discussion of genius out of the shadows and into the laughter of sunshine. In part, he wrote, it is richness of association and in part it is ignoring "old hat." James, in one of his strokes of genius, brings attention to the front. After all, he knows confusion is mistaking the wrong part of something for the thing, while reasoning is taking the right part of something for the thing. Therefore, both confusion and reasoning partake of the same essence.

## Not Even God Is Ripe Enough

Very far out African fables. Here's just the titles.

—SB

(Who sent this to us?)

**Not Even God Is Ripe Enough**  
Bakera Gbadamosi, Uli Geier  
1968; 58 pp.

About \$0.70

from:  
Heinemann Educational Books Ltd.  
48 Charles Street  
London W1  
England

Kindness won't kill you, but it can give you a lot of worries

The mouth that commits an offense must talk itself out of punishment

He who bids on the road will meet flies on his retreat

When life is good for us, we become bad

You can fool others, but can you fool yourself?

A wise man solves his own problems

He who has patience has everything

Not even god is ripe enough to catch a worm in love

The unexpected anger

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## Zen Mind, Beginner's Mind



Informal talks on Zen meditation and practice

by SHUNRI SUZUKI

Zen mind is one of those enigmatic phrases said by Zen teachers to make you notice yourself, to go beyond the words and wonder what your own mind and being are. This is the purpose of all Zen teaching — to make you wonder and to ensure that wondering with the deepest expression of your own nature. The calligraphy on the front of the binding reads in Japanese or katakana in *Sanskrit*. This is a name for Buddha which means "he who has followed the path, who has returned from richness, or in richness, richness, inness, emptiness, the fully completed one." It is the ground principle which makes the appearance of a Buddha possible. It is Zen Mind. At the time Suzuki-roshi wrote this calligraphy — using for a break the faded end of one of the large round leaves of the yucca plants that grow in the mountain around Zen Mountain Center — he said: "This means that Tathagata is the body of the whole earth."

—Richard Baker

**Galton's Walk**  
Herbert Crovis  
1970, 159 pp.

\$2.95 postpaid

from:  
Harper & Row Publishers, Inc.  
405 Third Street  
New York, New York 10016

or WHOLE EARTH CATALOG



In class one day, some undergraduates were told to tell a story, and observe the destruction of thought. One began, "There were three men on their way to Chatham. . . (pause) . . ." During the pause, the teacher said "Chatham," and the student boggled. He froze in amazed silence, having forgotten what he was going to say. Another student said, "I went down to the station and sat down at the lunch counter. . . (pause) . . ." During this pause, the teacher said, "I went," which also aroused whatever was to follow — not just the speech, but the intention.

We are now well acquainted with the idea that consciousness has the features of a plenum of thought. One began, "There were three men on their way to Chatham. . . (pause) . . ." During the pause, the teacher said "Chatham," and the student boggled. He froze in amazed silence, having forgotten what he was going to say. Another student said, "I went down to the station and sat down at the lunch counter. . . (pause) . . ." During this pause, the teacher said, "I went," which also aroused whatever was to follow — not just the speech, but the intention.

Finally, we are acquainted with some thrashings of the awakening beast, some roasting from the long sleep of thought, some attempts to jab it, poke it, mechanize it, shatter it, reform it, and shake it awake — so that we might find a way to the same things we do passively, as in dreaming, while we are awake and with all our wits about us.

We have seen that memory is aided by an externalized simulacrum of the hidden plenum, and that a little intellectual progress can be made in taking words and separating them into a pile called content and a pile called form.

Every trickster will be fooled once

A young man can have fine cloth like an

elder, but he can never have dark like an

elder

Half a truth is no truth

The pot that boils over only dirties itself

When the man who knows no disasters

hears weeping — he thinks it is song

Many words do not fill a basket

Every day is for the crook — but one day

is for the decaying

Hetred is like rain in a desert — it is of

no use to anybody

What an old man can see sitting down — a

young man can see sitting up —

A man's luck cannot be driven away —

only delayed

Large eyes produce many tears

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According to Christianity, every existence in nature is something which was created for or given to us by God. That is the perfect idea of giving. But if you think that God created man, and that you are somehow separate from God, you are liable to think you have the ability to create something separate, something not given by Him. For instance, we create airplanes and highways. And when we repeat, "I create, I create," I create, "I soon we forget who it is actually the "I" which creates the various things; we soon forget about God. This is the nature of human culture. Actually, to create with the "big I" is to give; we cannot create and own what we create for ourselves since everything was created by God. This point could not be stressed enough. But it is not enough to say that we are creating and the reason for the creation, we become attached to the material or exchange value. This has no value in comparison to the spirit or the nature of God's creation. Even though something has no material or relative value to any "small I," it has absolute value in itself. Not to be attached to something is to be aware of its absolute value. Everything you do should be based on such an awareness, and not on material or self-centered ideas of value. Then whatever you do is true giving, is "dane prajna paramita."

I discovered that it is necessary, absolutely necessary, to believe in nothing. That is, we have to believe in something which has no form and no color — something which exists before all forms and colors appear. This is a very important point. No matter what god or doctrine you believe in, if you become attached to it, your belief will be based more or less on a self-centered idea. You strive for a perfect faith in order to save yourself. But will take time to attain such a perfect faith. You will be involved in an idealistic position. In constantly seeking to actualize your ideal, you will have no time for composure. But if you are always prepared for accepting everything we see as something appearing from nothing, knowing that there is some reason why a phenomenal existence of such and such form and color appears, then at that moment you will have perfect composure.

## Egypt

For those who want to learn ancient Egyptian:

The standard work is Sir Alan Gardiner's *Egyptian Grammar*, 3rd ed., 1957, 320 pp. It is the best primer for beginners in any language and also the most authoritative reference grammar of Middle Egyptian. A magnificent piece of typesetting, it is used a general bibliography, and a complete sign list and vocabulary. 40c, 646 pp. x xxxv

For the latest scholarly editions see H. J. Polotsky's "Egyptian Texts" (Jerusalem, 1965, 26, 59 p.).  
The best and only dictionary in English is R. O. Faulkner's *A Concise Dictionary of Middle Egyptian*, Oxford, 1962, 327 pp. x 342.

For the history and culture of ancient Egypt:

John A. Wilson: *The Culture of Ancient Egypt*, Chicago, 1951. *U of Chicago Press Phoenix Book (paperback) \$2.45* best & most enlightening

Sir Alan Gardiner: *Egypt of the Pharaohs*, Oxford, 1961, paperback \$2.75

Adolf Erman: *The Ancient Egyptians*, a Sourcebook of their Writings, Harper Torchbooks, \$2.75

James E. Prichard, ed.: *Ancient Near Eastern Texts*, Princeton, 2nd ed. \$30.00, 550 pp.

W. C. Hayes: *The Scepter of Egypt*, Harvard, 1959, 2 vols. \$30  
Prices quoted for books from England are those of Blackwell's, Oxford, England. They can be ordered there cheapest.

Enthusiasts should write for the catalogues from Blackwell's and also from Otto Harrassowitz, 6200 Wiesbaden, Postfach 348, Germany. Note: I have listed only those works published in English. For works in other languages you can use the bibliographies in the above books as well as the book dealers catalogs.

Kenneth Conrad  
Chicago, Illinois



Dear Flash,

Here's what's going on:

Saturday I helped Leonard build a new pen for his dogs. Yesterday I crawled back into the house and found a candle burn. Then I sat a long time in the dark, just being quiet.

Yesterday I sprang rabbit shit on some old dead ground, and today spaded it in and sprinkled two gallons of red worms on it. I also ripped a lot of boards off this old house, and cleaned them up to use building myself a ped in a corner of the barn.

This house I'm living in is dead.

There are people living who have memories of it, and things that happened here. I remember things, and my sister, and there are a few others scattered around with old home movies in their brains they filmed in years gone by.

But the house itself is dead, and within the year it will be buried by an addition tons of mud and crap piled up behind it. The barn is where the life is now. The garden is behind it. The worms live inside in it. In part. There's a chicken lot on one side, and on two sides all the rabbits in their hutches that I told you about. They're in those hutches right this minute, Flash, wondering when I'm going to come and live there as their neighbor.

This afternoon I stuck my head in one of the hutches and breathed a while with the old mamma and her litter. She's brown and white and scolding. The babies are about three weeks old, just starting to hop in and out of the nest box on their own, and sniff their mother's solid food. They're getting curious about the larger world. The barn is where the life is now. The garden is behind it. I think satisfied. I looked deeply into one another's eyes a time or two. I'm her bringer of food. That's my whole function in the world as far as she's concerned. As a matter of fact, it's my function in the world as far as I'm concerned too, except that I know that she doesn't it that there's this whole larger scheme going on.

When I know that she doesn't it that her produce — the manure, those thousands of little pellets that gather beneath her — is food too, in this amazing scheme that my uncle started before he died, and that I'm now in the process of expanding.

(continued)



A Yaqui Way of Knowledge

This book records the experiences of an anthropology student who becomes the apprentice of Don Juan, a Yaqui Indian "man of knowledge" who is also a "diablero", a black sorcerer. It is a profoundly disturbing book since it opens up areas and ideas we usually dismiss or deny. Don Juan, over a period of five years, teaches the author a lot of his knowledge. He teaches through giving his apprentice various psycho-active plants: peyote, datura, and a mixture of psilocybin mushrooms, genista canariensis, and other plants. Each of these plants has its own way of teaching, its own demands and its own kind of power. For those of us who thought we understood psychology, this book reveals the rudimentary state of our knowledge. For those of us who have dismissed magic as a combination of hypnotism and stage effects we are confronted with powerful and effective magic which seems irrefutable.

Don Juan himself appears as a powerful, indecipherable, wise man whose knowledge is both extensive and alien to our own. He offers to each of us the possibility of dealing with other realities, but he makes it clear that all these ways are dangerous, difficult and once entered, cannot be put aside as simple another experience.

The goal of his teaching is partially expressed as follows:

The particular thing to learn is how to get to the crack between the worlds and how to enter the other world. There is a crack between the two worlds, the world of the diableres and the world of living men. There is a place where these two worlds overlap. The crack is there. It opens and closes like a door in the wind. To get there a man must exercise his will. He must, I should say, develop an indomitable desire for it, a single minded dedication. But he must be able to control his own mind...

Not to book to be read for pleasure, a book which will affect you more than you may wish to be affected.

(Reviewed by Jim Fadiman)

(Why not book to be read for pleasure? It's frontier Boswell and Johnson. —SB)

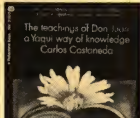
The Teachings of Don Juan: A Yaqui Way of Knowledge

Carlos Castaneda

\$9.95 postpaid

from: Ballantine Books  
101 Fifth Avenue  
New York, New York 10003

or WHOLE EARTH CATALOG



He looked at me for a long time and laughed. He said that learning through conversation was not only a waste, but stupidity, because learning was the most difficult task a man could undertake. He asked me to remember the time I had tried to find my spot, and how I wanted to find it without doing any work because I had expected him to hand out all the information. If he had done so, he said, I would never have learned. But, knowing how difficult it was to find my spot and, above all, knowing that it existed, would give me a unique sense of confidence. He said that while I remained rooted to my "good spot" nothing could cause me to budge, because I had the assurance that at that particular spot I was at my very best. I had the power to show off anything that might be harmful to me. If, however, he had told me where it was, I would never have had the confidence needed to claim it as true knowledge. Thus, knowledge was indeed power.

"Don't get me wrong, Don Juan," I protested. "I want to have an ally, but I also want to know everything I can. You yourself have said that knowledge is power."

No! he said emphatically. "Power rests on the kind of knowledge one holds. What is the sense of knowing things that are useless?"

Once a man has vanquished fear, he is free from it for the rest of his life because instead of fear, he has acquired clarity of mind which erases fear. By then a man knows his desires; he knows how to satisfy those desires. He can anticipate the new steps of learning, and a shakily surrounds everything. The man feels that nothing is concealed.

And thus he has encountered his second enemy: Clarity. That clarity of mind, which is so hard to obtain, dissipates fear, but also blinds

"I say it is useless to waste your life on one path, especially if that path has no heart."

"But how do you know when a path has no heart, Don Juan?" "Before you embark on it you ask the question: Does this path have a heart? If the answer is no, you will know it, and then you must choose another path."

"But how will I know for sure whether a Path has a heart or not?" "Anybody would know that. The trouble is anybody asks the question and when a man finally realizes that he has taken a path without a heart the path is ready to kill him. At that point every few men can stop to deliberate, and a few can stop to think."

"How should I proceed to ask the question properly, Don Juan?" "Just ask it."

"I mean, is there a proper method, so I would not lie to myself and believe the answer is yes when it really is no?"

"Why would you lie?" "Perhaps because at the moment the path is pleasant and enjoyable."

"That is nonsense. A path without a heart is never enjoyable. You have to work hard even to take it. The other hand, a path with a heart is easy; it does not make work at liking it."

You have the vanity to believe you live in two worlds, but that is only your vanity. There is but one world, the world of men. We are men, and must follow the world of men contentedly.

"But is this business of the dog and me pissing on each other true?" "It was not a dog. How many times do I have to tell you that? This is the only way to understand it. It's only the only way I was 'he' who played with you."

"Let's put it another way, Don Juan. What I mean to say is that if I had tied myself to that rock, and if I had been told I would have flown just by the same, because my body had nothing to do with my flying." Don looked at me incredulously. "If you tie yourself to a rock, you are dead. I'm afraid you will have to fly holding the rock with its heavy chain."

He listened without interrupting me. I talked for a long time. Then he said:

"All this is very easy to understand. Fear is the first natural enemy a man must overcome on his path to knowledge. Besides, you are curious. That eases up the score. And you will learn in spite of yourself; that's the rule."

I protested for a while longer, trying to dissuade him. But he seemed to be convinced there was nothing else I could do but learn.

"You are not thinking in the proper order," he said. "Mescalito actually played with you. That's the point to think about. Why don't you dwell on that instead of your fear?"

"Was it too unusual?"

"You are the only person I have ever seen playing with him. You are not used to this kind of life; therefore the indications [omens] bypass you. Yet you are a serious person, but your seriousness is attached to what you do, not to what goes on around you. You dwell upon nothing too much. That's the trouble. And that produces a terrible fatigue."

"What do you talk to yourself about?"

"I don't know; anything, I suppose."

"If I tell you what we talk to ourselves about. We talk about our world. In fact we maintain our world with our internal talk."

"How do we do that?"

"Whenever we finish talking to ourselves the world is always as it should be. We renew it, we kindle it with life, we uphold it with our internal talk. Not only that, but we also choose our paths as we talk to ourselves. Thus we repeat our own decisions over and over until the day we die, because we keep on repeating the same internal talk over and over until the day we die."

"A warrior is aware of this and strives to stop his talking. This is the first point you have to know if you want to live as a warrior."

"How can I stop talking to myself?"

"First of all you must use your ears to take some of the burden from your eyes. We have been using our eyes to judge the world since the day we were born. We have told others and to ourselves mainly about what we see. A warrior is aware of that and listens to the world; he listens to the sounds of the world."

I put my notes away. Don Juan laughed and said that he did not intend I should force him to know if he was listening to the sound of the world had to be done harmoniously and with great patience.

"A warrior is aware that the world will change as soon as he stops talking to himself," he said, "and must be prepared for that momentally."

"What do you mean, Don Juan?"

"The world is such-and-so or so-and-so only because we tell ourselves that that is the way it is. If we stop telling ourselves that the world is so-and-so, the world will stop so-and-so. And there, I don't think you're ready for such a momentous blow, therefore you must start slowly to undo the world."

"The sole idea of being detached from everything I know gives me the chills," I said.

"You must be joking! The thing which should give you the chills is not to have anything to look forward to but a lifetime of doing that which you have hated. We have the pink of the corn year after year until he's too old and tired to get up, so he lies around like an old dog. His thoughts and feelings, the best of him, ramble aimlessly to the only thing he has ever done, to plant corn. That, to me, is the most frightening waste there is."

"We are men and our lot is to learn and to be hurled into inconceivable new worlds."

"There aren't any new worlds for us!" I exclaimed.

"We have exhausted nothing, you fool!" he said imperatively. "Seeing is for incapable men. Temper your spirit now, become a warrior, learn to see and then make the statement that there are no longer new worlds for our vision."

A Separate Reality

The Teachings of Don Juan ended with Castaneda ceasing his apprenticeship, profoundly afraid to continue. In this book he is back at it, and in place of the fear prevalent in the first book now a humor pervades the teachings, along with some phenomenal events.

I don't have words for its importance I consider these books to carry.

—SB

A Separate Reality — Further Conversations with Don Juan

Carlos Castaneda

1971/317 pp.

\$6.95 postpaid

from: Simon & Schuster, Inc.  
10 W. 33rd Street  
New York, N.Y. 10018

or WHOLE EARTH CATALOG



"Piestee told me, Don Juan, what exactly is controlled folly?"

Don Juan laughed loudly and made a smacking sound by slapping his thigh with the hollow of his hand.

"This is controlled folly?" he said, and laughed and slapped his thigh with the hollow of his hand.

"What do you mean...?"

"I am happy that you finally asked me about my controlled folly after so many years, and yet it wouldn't have mattered to me in the least if you had never asked. Yet I have chosen to feel happy, as if I cared, that you asked, as it would matter that I care. That is controlled folly."

"Would I feel differently if I could see?" I asked.

Once a man learns to see he finds himself alone in the world with nothing but folly," Don Juan said cryptically. He paused for a moment and looked at me as if he wanted to judge the effect of his words.

"Your acts, as well as the acts of your fellow men in general, appear to be important to you because you have learned to think they are important."

He used the word "learned" with such peculiar inflection that it forced me to think about what he meant by it.

He stopped handling his plants and looked at me.

"We must to seek about our own folly," he said, "and then we train our eyes to look as we think about the things we look at. We look at ourselves already thinking that we are important. And therefore we've got to feel important! But when a man learns to see, he realizes that he can no longer think about the things he looks at, and if he cannot think about what he looks at everything becomes unimportant."

"Take your grandson Lucio," I said. "Would your acts be controlled folly at the time of his death?"

"Take my son Eulalia, that's a better example," Don Juan replied. "He was crushed by rocks while working in the construction of the Pan-American Highway. My acts toward him in the moment of his death were controlled folly. When I came down to the blasting area he was almost dead, but his body was so strong that it kept on moving and kicking. I stood in front of him and told the boys in the crew not to move him any more; they obeyed me and stood there surrounding my son, looking at his mangled body. I stood there too, but I did not look. I shifted my eyes so I would see his personal life disintegrating, expanding uncontrollably beyond its limits, like a fog of crystals, because that is the way life and death mix and expand. That is what I did at the time of my son's death. That's all one could ever do, and that is controlled folly. Had I looked at him I would have watched him becoming immobile and I would have felt a cry inside of me, because never again would I look at his fine figure facing the earth. I saw his death instead, and there was no sadness, no feeling. His death was equal to everything else."

Don Juan was quiet for a moment. He seemed to be sad, but then he smiled and tapped my hand.

"So you may say that when it comes to the death of a person I love, my controlled folly is to shift my eyes."

I thought about the people I love myself and a terribly oppressive wave of self-pity enveloped me.

"Lucky you, Don Juan," I said. "You can shift your eyes, while I am not."

He gave me a statement funny and laughed.

"Lucky, bull!" he said. "It's hard work."

"You think and talk too much. You must stop talking to yourself."

"What do you mean?"

"You talk to yourself too much. You're not unique at that. Every one of us does that. We carry on an internal talk. Think about it. Whenever you are alone, what do you do?"

"I talk to myself."

## Tantra Asana

All that have seen a copy of Tantra Art and its incandescent images have been tantalized by a year of rumors that a second Tantra book was coming. Here it is, more riches, tools, from what must be an inexhaustible source.

—SB

Tantra Asana  
Ajit Mookerjee  
1971; 164 pp.

\$35.00 postpaid

from:  
Shambhala Publications, Inc.  
1400 5th Street  
Berkeley, California 94710

or

Ravi Kumar, Publisher  
Basilin Press  
4007 Basel  
Switzerland

or WHOLE EARTH CATALOG

Some copies of Tantra Art are still available for \$35 from Shambhala.

## TANTRA ASANA



Rati is Kama's sakti representing kinetic energy. Kama is the god of love about whom it is said in the Vedas: "Desire first arose at the dawn of creation." In the Atharva-Veda, Kama is known as the creator. They remain in a union of oneness, enjoying that supreme bliss which is the highest non-duality.



## "The woman you love, you must not possess"

### Mysticism

The mystical event is to occupy ONE. Every time it happens it is a life enhancer and a history enhancer. Evelyn Underhill wrote this classic to gather and map the full range of Western mystical experience — Greek, Catholic, Protestant — and yours if you care to follow the steps. Each of those ONEs is unique. Each is the same. That seems pat, but this book approximately proves it.

—SB

[Suggested by James Watkins]

Mysticism  
Evelyn Underhill  
1911; 519 pp.

\$2.45 postpaid

from:  
E. P. Dutton & Company, Inc.  
201 Park Avenue South  
New York, N.Y. 10003

or WHOLE EARTH CATALOG



... Réjéac has well said that "from the moment in which man is no longer content to devise things useful for his existence under the exclusive action of the will-to-live, the principle of (physical) evolution has been violated." Nothing can be more certain than that man is not so content. He has been called by utilitarian philosophers a tool-making animal — the highest praise they knew how to bestow. More surely he is a vision-making animal; a creature of perverse and impractical ideals, dominated by dreams no less than by appetites — dreams which can only be justified upon the theory that he moves towards some other goal than that of physical perfection or intellectual supremacy, is controlled by some higher and more vital reality than that of the determinists. We are driven to the conclusion that if the theory of evolution is to include or explain the facts of artistic and spiritual experience — and it cannot be accepted by any serious thinker if these great tracts of consciousness remain outside its range — it must be rebuilt on a mental rather than a physical basis.

Pain, then, plunges like a sword through creation, leaving on the one side cringing and degraded animals and on the other side heroes and saints, it is one of those facts of universal experience which are peculiarly intractable from the point of view of a merely materialistic philosophy.

... Where the philosopher guesses and argues, the mystic lives and looks; and speaks, consequently, the disconcerting language of first-hand experience, not the dead dialectic of the schools. Hence what the Absolute of the metaphysicians remains a diagram — impersonal and unattainable — the Absolute of the mystics is lovable, attainable, alive.

... "All mystics," said Saint-Martin, "speak the same language, for they come from the same country." The deep undying life within us came from that country too — and it recognizes the accents of home, though it cannot always understand what they would say.

... there are two distinct sides to the full mystical experience. (A) The vision or consciousness of Absolute Perfection. (B) The inward transmutation to which that Vision compels the mystic, in order that he may be to some extent worthy of that which he has beheld; may take his place within the order of Reality. He has seen the Perfect; he wants to be perfect too. ...

... "Thou, my God, who art Love," says Nicolas of Cusa, "art Love that loveth, and Love that is loved, and Love that is the bond between these twain." ...

... Here the common opinion that a pious effeminacy, a diluted and enfeebled spirituality, is the proper raw material of the mystic life, is emphatically contradicted. It is not by the education of the lamb, but by the hunting and taming of the wild intractable lion, instinct with vitality, full of ardour and courage, exhibiting heroic qualities on the sensual plane, that the Great Work is achieved. The lives of the saints enforce the same law.

... To go up alone into the mountain and come back as an ambassador to the world, has ever been the method of humanity's best friends. ...

... That law of the inner life, which sounds so fantastic and yet is so bitterly true — "No progress without pain" — asserts itself. It declares that birth pang must be endured in the spiritual as well as in the material world; that adequate training must always hurt the athlete. Hence the mystic's quest of the Absolute drives them to an eager and heroic union with the reality of suffering, as well as with the reality of joy.

... In that renaking of his consciousness which follows upon the mystical awakening, the deep and primal life which he shares with all creation has been roused from its sleep. Hence the barrier between human and non-human life, which makes man a stranger on earth as well as in heaven, is done away. Life now whispers to his life: all things are his intimates, and respond to his fraternal sympathy.

... "When the soul is plunged in the fire of divine love," he says, "like iron, it first loses its blackness, and then growing to white heat, it becomes like unto the fire itself. And lastly, it grows liquid, and losing its nature is transmuted into an utterly different quality of being." "As the difference between iron that is cold and iron that is hot," he says again, "so is the difference between soul and soul: between the tepid soul and the soul made incandescent by divine love." ...

It's a business, actually. I mean, just this very second I flashed that this enterprise of mine is actually a business. It's called The Magic Rabbit. The rabbits are my employees. They shit all week, around the clock, and I pay them with food. Out purpose is soil redemption. Salvation! Healing by miracles, signs and wonders. The theme song of our commercials is The Old Rugged Barn.

On a hill far away,  
Stood an old rugged barn,  
The emblem of effort and pride.

For out!

Come be my partner, Flash. Go find Estelle and bring her with you, and join the Magic Rabbit. Incorporated, and we'll get into soil salvation. First we'll save our own; we'll breed ten thousand rabbits and twenty million worms, and make this dead old hillside bloom. Then if other people feel like they've got a troubled soul, why let them call upon us, and we'll respond, with miracles, signs and wonders.

Faith, brother! Faith and rabbit shit, that's the theme!

On a hill far away,  
Stood an old rugged barn,  
The emblem of effort and pride.  
How I love that old barn,  
So depleted by the world,  
For the weariness that happens inside.

You've got forty-eight hours to reply to this business proposal, Flash. Refuse it at the peril of your soul.

Your associate,  
D.R.



432 Thinking  
Learning

The 1 Ching, the Book of Changes, is a brilliant problem-solving device. A problem (or ignorance) generally consists of being caught in local cyclic thinking. To consult the oracle, the wisdom of chance (or synchronicity, no matter), is to step out of the cycle of no-change and address a specific topic on the nature of change. You now have an alternative set of solutions that owe nothing but proximity to your problem. You make the associations, you work the way out. It's prayer.

I can't think of a more important and useful book than this one. It's famously ancient, poetic, deep, esoteric, simple, impenetrable. It has been the most influential book on American art and artists in the last 15 years.

Most people know about it. We've included it here to point at the new smaller (unabridged) cheaper Princeton University Press version of the classic Wilhelm-Baynes Bollingen edition. The oracle method is still on page 721.

—SB

The | Ching

Translated by Richard Wilhelm, Cary F. Baynes  
7 B.C., 740 pp.

\$6.00 postpaid

from:  
Shambha Publications  
1001 Seventh St.  
Berkeley, CA 94710  
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from:  
Princeton University Press  
Princeton, New Jersey 08540  
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## Leisure—The Basis of Culture

This is a searching, philosophical book, examining some important questions. It first appeared 20 years ago and surprisingly few people have read it.

But that isn't the item.

Here's the item: why would an economic consultant, specializing in recreation responses, turn to this kind of philosophical tract as a source book? Introduction by T.S. Eliot, yet, when there are dozens of current, thickly documented studies available, prepared by first rate scholars, dealing with leisure, social change, consumer behavior and all the other relevant issue consultants are paid to investigate?

This is a question I am anxious to answer, especially for Whole Earth users, and as it seemed to be, I imagine, many others who are superficially interested in issues as basic to these times as leisure and our culture.

Whenever I read the current literature and listen to the experts on the subject of leisure, I realize that no one has contributed much new wisdom to the field beyond what Pieper, in fewer than 100 pages, has laid out. His major contribution, in my opinion, is to set down a fundamental, no-hesitant, definition of leisure, which certainly has nothing to do with motor boat sales, average hours of work, and all that statistical trash that keep so many consultants and writers employed. In Pieper's words:

Leisure, it may be clearly understood, is a mental and spiritual attitude. It is not simply the result of external factors, it is not an inevitable result of some time, a holiday, a weekend or a vacation. It is, in the first place, an attitude of mind, a condition of the soul, and an attitude of contrast to the ideal of "work" in each and every one of the three aspects under which it was analyzed: work as activity, as rest, as a social function.

Compared with the exclusive ideal of work as activity, leisure implies (in the first place) an attitude of non-activity, of inward calm, or silence; it means not being "busy," but letting things happen.

Leisure is a form of silence, of that silence which is the prerequisite of the apprehension of reality: only the silent hearer and those who do not remain silent do not hear. Silence, as it is used in the Greek does not mean "silence" or "isolation," it means the meaning which I am concerned to put before you. God, we are told in the first chapter of Genesis, "ended his work which he had made" in the "beginning" of time. In the same way man celebrates and gratefully accepts the reality of creation in leisure, and the inner vision that accompanies it. And just as Holy Scripture tells us that God rested on the seventh day and beheld that "the work which he had made" was "very good"—so too it is leisure which leads man to accept the reality of the creation and to realize it, resting on the inner vision that accompanies it.

The adoption of this definition is like adopting a religion. Your life may be permanently altered.

It is not the attitude of mind of those who actively intervene, but of those who are open to everything; not of those who grab and grab hold, but of those who leave the reins loose and who are free and at ease—almost like a man falling asleep, for one can only fall asleep by "letting oneself go". Sleeplessness and the incapacity for leisure are really related to one another in a special sense, and a man at leisure is not unlike a man asleep.

Compared with the exclusive ideal of work as toil, leisure appears (perhaps) in its character as an attitude of contemplative "celebration," a word that I don't like, but which is close to the very heart of the meaning which I am concerned to put before you. God, we are told in the first chapter of Genesis, "ended his work which he had made" in the "beginning" of time. In the same way man celebrates and gratefully accepts the reality of creation in leisure, and the inner vision that accompanies it. And just as Holy Scripture tells us that God rested on the seventh day and beheld that "the work which he had made" was "very good"—so too it is leisure which leads man to accept the reality of the creation and to realize it, resting on the inner vision that accompanies it.

## 40. Hsieh | Deliverance

below CH'EN THE ANNOYING, THUNDER  
above K'AN THE ARMYING, TUNDRER

Here the movement goes out of the sphere of danger. The obstacle has been removed, the difficulties are being resolved. Deliverance is not yet achieved; it is just in its beginning, and the hexagram represents its various stages.

### THE JUDGMENT

DELIVERANCE. The southwest furthers.

If there is no longer anything where one has to go, Return brings good fortune.

If there is still something where one has to go, Hastening brings good fortune.

## 40. Hsieh | Deliverance

This refers to a time in which tensions and complications begin to be eased. At a time when we ought to make our way back to ordinary conditions as soon as possible; this is the meaning of "the southwest." These periods of sudden change have great importance. Just as rain relieves atmospheric tension, making all the buds burst open, so a time of deliverance from burdensome pressure has a liberating and stimulating effect on life. One thing is important, however: in such times we must not overdo our triumph. The point is not to push on farther than is necessary. Returning to the regular order of life as soon as deliverance is achieved brings good fortune. If there are any residual matters that ought to be attended to, it should be done as quickly as possible, so that a clean sweep is made and no retardations occur.

### THE IMAGE

Thunder and rain set in.

The image of DELIVERANCE.

Thus the superior man pardons mistakes

And forgives misdeeds.

A thunderstorm has the effect of clearing the air; the superior man produces a similar effect when dealing with mistakes and sins of men that induce a condition of tension. Through clarity he brings deliverance. However, when failings come to light, he does not dwell on them; he simply passes over mistakes, the unintentional transgressions, just as thunder dies away. He forgives misdeeds, the intentional transgressions, just as water washes everything clean.

...in the same way, no one who looks to leisure simply to restore his working powers will ever discover the fruit of leisure; he will never know the quickening that follows, almost as though from some deep sleep. Aristotle says of leisure, "A man will live thus, not to the extent that he is a man, but to the extent that a divine principle dwells within him."

Leisure, it may be remembered, is not a Sunday of idleness, but the presence of freedom of education and culture, and of that undiminished humanity which views the world as a whole.

...one again, work stops for the sake of work, and the feast is substituted for "work." There can be no amusement, no recreation—circuses—but who would think of describing that kind of mass entertainment as festival?

It simply cannot be otherwise: the world of "work" and of "leisure" is a poor, impoverished world, be it ever so rich in material goods; for on an exclusively utilitarian basis, on the basis, that is, of the world's view of "work," genuine wealth, which comes from flowing into superfluities, into unpossessories, is just not possible. Wherever the superfluities make its appearance it is immediately subjected to the rationalist, utilitarian principle of the world of work. And, as the traditional Russian saying puts it: work does not make one rich, but round-shouldered.

[Suggested and reviewed by Richard Raymond]

## Leisure—The Basis of Culture

Josef Pieper  
1952; 127 pp.

\$ .95 postpaid

from:

New American Library  
301 Ave. of the Americas  
New York, N.Y. 10019

or WHOLE EARTH CATALOG



## WEDNESDAY: URGE'S BATH

When D.R. was out of the hill late Wednesday to mail his letter to the Flash he was almost certain there'd be a letter waiting for him at the store. From the Flash, from Mac, from Mrs. Godsey, by sudden cosmic arrangement, some word from Estelle. A postcard, a note, something, from somebody.

But there wasn't. And D.R. had to fight his disappointment down.

He bought a Coke from Mrs. Godsey, and after he had drunk it he bought a few more groceries to see him through the remainder of the week. Mrs. Godsey asked D.R. how he was and he said fine, but it was clear to her that he wasn't fine, and Mrs. Godsey found herself worrying about D.R. a little. She tried to think of something to say that might make him feel better, but she didn't have any content in any of the words she said, but she wanted to say, by sudden cosmic arrangement, some word from Estelle. A postcard, a note, something, from somebody.

Before he started back to work a minute, D.R. went around in back of Godsey's store to look in Urge a hill. Urge had still not been given a turning clearing since he had been in Kentucky. A little at a time, D.R. had been taking stuff out of the bus and the other turning it away or carrying it with him up the hill. But the great bulk of their stuff still had not been touched, and in looking at it one D.R. felt suddenly inspired to pitch in then and there and clean it out once and for all.

As soon as he decided that what he wanted to do, he felt instantly better, and better still when he started dumping out of the bus left and right. He spread that old bed spread that he had on top of the bus to the right. He dragged the mattress out and laid it on the grass in Leonard's yard. He collected the worst of the actual trash, the empty beer cans, old apple cores, old magazines, and grubby old paper napkins, and threw it all outside in a pile. Beside it he piled an old quilt that had a shagreened surface and was stained on the top and a towel too far gone to preserve. A pair of his own worn-out jeans wound up on the pile.

When he started coming to things he wasn't sure what he should do with, he began a separate pile. He found a pair of Estelle's old sneakers, worn through at the little toe, laced with binder twine. He found a pair of her cut-off Levis, and three dirty socks. In a pillowcase he found two of her special outfits, the gingham frontier dress, and the tie-dyed jumpsuit she'd made out of a mechanic's overalls. He found their kitchen stuff in a box lined with the green sports section of the San Francisco Chronicle. The pots and pans and plates and plastic plates and bowls were piled in with the Macola Corn Oil, a box of salt, some spices in little cans, brown sugar in a jar, some old rice. He found their mangled copy of the Whole Earth Catalog, the paperback of *Stranger in a Strange Land* that Estelle had made so many notes in. And then, way back under the bed, face down on the floor, opened at the hexagram called Youthful Folly, D.R. found their *I Ching*.

For

## The Ching

It was like running into an old friend. D.R. picked it up and dusted it off and looked at it for a while before he read it. He had been waiting for the Ching. It was time for him to start consulting it again. And maybe he could find some shit to order from the Catalog, too. The found books pleased D.R. enormously, and lifted him past the little desire that had begun to build in him to stop working on the bus and go folks out somewhere. D.R. was suddenly filled with tenderness and affection for Urge, and he wanted the whole way with his cleaning job.

When he had emptied the bus completely, he went to Roxia's house and borrowed a broom, and swept everywhere in the bus the broom could touch. Roxia showed him where the outdoor faucet was, and Leonard's hose. D.R. took the sleeping bag off the top, spread them out beside the mattress, and moved Urge until the hose could reach. And then he washed him good, all over, inside and out, with soap and warm water from Roxia's kitchen, and then a cold rinse with the hose. It was the first bath Urge had since the west coast, and you could tell by the sound of the motor how good the old bus dog was. It was the first time he had ever get some cardboard boxes. Mrs. Godsey told him he could store anything he wanted to in her basement. D.R. spent the rest of the afternoon sorting through the stuff that he would keep, getting it into boxes, four of them, and then stacking the boxes on the floor of Mrs. Godsey's basement.

Leonard came home from another day with the Grand Jury in town and Leonard said that he was sure he would like to stick around for supper. D.R. said no thanks. He had a whole new fund of energy now, and he wanted to get back up on the hill with it, and use it well. He gathered up his books and his groceries and set out whisking back up Trac's again.



## WEDNESDAY EVENING: THE BOOKS

Whole Earth Catalog: Shit, man, I want that. And that. And that! I want The Owner-Built Home. I want House Carpentry. Simplified. I want Dumbbuck Ome. I want Manual of Individual Supply Systems. I want Direct Use of The Sun's Energy. I want Electricity From The Wind. I want an Ashley stove. I want the Encyclopedia of Organic Gardening. I want Livestock and Poultry Production. I want Goat Husbandry. I want Human Use of The Earth. I want Rural Industries. I want Farmers of Forty Centuries. I want a Corona Hand Mill. I want The New Religions. And I want Estelle to get here just as fast as she possibly can.

(continued)



# Credits

## Cumulative Roster of Whole Earth Catalog Editors

FALL 68	Stewart Brand
Jan 69	SB
March 69	SB
SPRING 69	SB (with Lloyd Kahn— Shelter & Land Use)
July 69	SB
Sept 69	SB
FALL 69	SB (with Lloyd Kahn— Shelter & Land Use)
Jan 70	SB
March 70	Gurney Norman (with Diana Shugart)
SPRING 70	SB (with Lloyd Kahn— Shelter & Land Use)
July 70	Gordon Ashby (with Doyle Phillips)
Sept 70	Gurney Norman (with Diana Shugart)
FALL 70	JD Smith (with Hal Hershey— Community) [The six month's prior research was also JD's, done while he was managing the Truck Store.]
Jan 71	SB
March 71	Ken Kesey and Paul Krassner
LAST CATALOG	SB

## Divine Right

Gurney Norman

Those with **Portola Institute** who we owe the most to are

Richard Raymond

Les Rosen

Larry Kline

Vern John

Eleanor Watkins

Nancy Wirth

Mitzi O'Dell

And our agent

Don Gerrard

## Production Credits

LAST CATALOG Spring 71

Steamboat (70-71) Layout and drawings

Fred Richardson (69-71) Camera and index

Evelyn Goslow Composer

George de Alth Layout

Mike Goslow Layout

Phyllis Grossman (70-71) Composer

Laura Besserman Proofreading

Trudy Smith Composer

Mar 71 Supplement, add

Ron Bevirt Schedule

Jan 71 Supplement, add

Hal Hershey (69-71) Layout

Barbara DeZonia Composer

Bud DeZonia Field operations

Anti Farm Diversions

Lois Brand Corrections and food

Fall 70 CATALOG, add

Robin Wakeland Composer

Spring 70 CATALOG, add

Cappy McClure (69-70) Composer

Ellen Hershey Sundry

Peter Bailey (68-70) Cover

Mar 70 Supplement, add

Mary McCabe (69-70) Layout

Fall 69 CATALOG, add

Joe Bonner (68-69) Layout

Jay Bonner Layout

Sept 69 Supplement, add

Jan Ford Composer

July 69 Supplement, add

Annie Helmuth Composer

Fall 68 CATALOG, add

Sandra Tcherepnin Composer

And at **Nowels Publications**

Bob Parks

## Truck Store Credits

Laura Besserman (70-71) Research and books

Lois Brand (68-71) Bookkeeper

JD Smith (70-71) Manager

Herald Hoyt (70-71) Books

John Clark (69-71) Mailorder

B. Anne Hines Bookkeeper

Francine Slate (70-71) Bookkeeper

Dudley DeZonia (70-71) Mailorder

Jerry Fihn (70-71) Subscriptions

Barbara DeZonia Mailorder

Bernie Sproch (69-71) Filing and store

Amy Fihn (70-71) Subscriptions

Mary Jo Morra (70-71) Subscriptions

Diane Erickson (70-71) Store and mailorder

Soni Stoye (70-71) Lunch, flyers

Terri Gunetch (70-71) Lunch

Troll (70-71) Subscriptions, BD-4

Peter Ratner (69-71) Books

Doug Gunetch BD-4

Bob Rich BD-4

Molly Books

Pam Smith (70-71) Mailorder

George de Alth (70-71) Subscriptions

Austin Jenkins (70-71) Mailorder

Carolyn Green (70-71) Lunch

Hal Hershey (69-71) Manager

Diana Shugart (69-71) Research

Les Rosen (69-70) Bookkeeper

Mary McCabe (69-70) Store

Megan Raymond (69-70) Sundry

Shel Kaplan (70) Sundry

Russell Bass (69-70) Subscriptions

Leslie Acoca (70) Subscriptions

Tracy McCallum (69-70) Manager

Alan Burton (69-70) Mailorder

Barbara McCallum (69) Mailorder

Rob Gilmer (69) Mailorder

Arnold Scher (69) Mailorder

Michael Handler (69) Store

# How To Do a Whole Earth Catalog

The masked man left behind a silver bullet. The people said, "We'd rather have a scribbled diagram," and they shot him with his silver bullet. Here's our scribbled diagram.

Take what you can use, and let the rest go by.  
Ken Kesey 1969

## Researching

For us this consisted of three big jobs. 1) Encouraging an incoming flow of information—spontaneous research by the readership. 2) Scanning "the literature" for promising stuff. 3) Sorting the good from the bad.

1) The incentives we laid out for spontaneous suggestions were: reward of money (\$10 for published review, later \$10 for any useful suggestion); reward of recognition (we published the name of the reviewer and suggested, split as correctly as possible); reward of honor-by-recognition to the extent that we kept valid high standards, and honored the famous supporter no more than the teenage one; reward of doing a good deed (to be a noble contributor we had to stay clean); reward of return (to the extent that we gave good, people returned it).

2) "The literature" for us consisted of Publisher's Weekly, *Fortune*, *Coming Books in Print* (both from R. R. Bowker, source of all the basic cataloging information on books in the U.S.—a source R. R. Bowker a major pillar of Western Civilization; they labor endlessly, inevitably, without bias and of course unharmed). *Science* (how list all the books sent to them for review). *Scientific American* (the first national publication to notice us, by the way, *Popular Science* for tools), and under our cooperative competition such as *Mother Earth News*, *Big Rock Candy Mountain*, *Canadian Whole Earth Almanac*, *Natural Life* styles.

Other major sources: catalogs from the publishers, bibliographies in good books (especially when annotated), big book stores, especially *Kepner's*, friends' bookshelves, the *Stanford and Manly Park libraries*, and our own bookshelves revisited.

At the beginning of the CATALOG I ordered copies of promising titles at about \$40 discount on an *ABA's Single Copy Order Plan*. After about a year of this MITT said we didn't really have to order books; we could just go to the publishers and get free review copies from all the publishers and usually got them, at least on new books. It took some self-policing to keep from receiving review copies that we just wanted to have. There are some built-in conflicts-of-interest in the reviewing business.

3) Sorting. Fuller calls it "tuning out everything that's irrelevant", and considers it the core activity of thinking. It is utterly homogeneous. It is shoveling ash by the mountainload. I never spent my time reading the good stuff—whose quality was usually evident. I'm sure I spent the yellowed-out hours reading the lousy books, digging past their promising facades to the hollow within. Some of these wound up in the stove, where their juices dried.

Sorting requires criteria for yes and no, and ends to sort within. By analytic good fortune I thought to spell out our criteria at the beginning on page one of the first CATALOG. The sets (the section headings, devised originally as a secondary division of our contents) also held up surprisingly well. Both the criteria and the sets became well-worn handles on the otherwise wholly unmanageable mass of information that flooded in. They also helped preserve continuity during three years of gradually migrating values.

At the beginning of the CATALOG I imagined us becoming primarily a research organization, with nifty projects everywhere, teams for climbing around on new dome designs, solar generators, machine converters; comparing various sound systems, horse breeds, teaching methods, and you're not apt to fall into pitiation from the author's style or petty argument with his view, as critics do.

In fact we didn't do enough research. Not the studious kind. Of our staff of about 26, only 2 or 3 were ever engaged in active search for CATALOG material. It could have been much more and better, but it never got organized, probably because of prima donna failings on my part.

## Reviewing

Usually I review a book before I read it. These are almost always shorter, snitcher, more positive and useful reviews. You're approaching the book from the same perspective as the reader—unfamiliarity, and you're not apt to fall into pitiation from the author's style or petty argument with his view, as critics do.

So, I review the book, enthusiastically, on what I know from its title, its subject, the author, my own experience, and a hasty glance at the book. Then I read a little more deeply to see if the review is fulfilled. If not, I either rewrite the review or discard the book.

The quickest clue to the authority of a book are its illustrations and its photos. One can look a little more deeply to see if the review is fulfilled. If a book has a whole page devoted to a photograph of nothing, with a nothing caption and credit to some manufacturer (the photo, throw away book. Look for photographs that contain real information related to the text, and captions that multiply the use of the picture; or diagrams that deliver complex understanding simply. In the back of the book look at the photographs. If they are absent, or inflated and/or unannotated, or oddly limited, be suspicious. The bibliography is an easy way to compare the author's judgment with your own.

The CATALOG format for reviews includes excerpts from the book (for magazine or catalog). The excerpts should expose the book—convey quickly what's in it, and deliver a few complete ideas independently useful to the reader. I always attempt to get the book with the excerpts, extract its central value. Really good books like *On Growth and Form*, or *Stick and Rudder*, or *Natural Way in Dress* will not be gotten; practically any line or picture in them can be used.

An ideal review gives the reader: a quick idea of what the item is, what it's useful for, how it compares to others like it, and how competent the reviewer is to judge. (This last is what I've posted part of the review and review on the back of the book, with the weaknesses and strengths of the various reviewers.)

The horrible temptation in reviews is to show off rather than simply introduce the item and the reader to each other and get out of the way.

## Editing

The operational word on the cover of the CATALOG is *accuracy*. Ultimately that means giving the reader access from where he is to where he wants to be. Which takes work, work takes tools, tools need finding, and that's where we came in.

A good catalog is a quick-can array of tools, where you can find what you want easily, with detailed information where you're interested.

Our attempt to fulfill these requirements led to un-based section headings (Shelter, Land Use, Communications, etc.), an alphabetic index, and page-theme layout.

On each page we try to have one graphic which "keys the page", tells with a glance what's there. The hardest thing we had to learn was providing simple clear demarcation between items—an unadorned line.

We publish considerable detailed information—fine print. Sorting among that is aided by a consistent code of type-faces (reviews are always "universals tall", access is always "teasy", *Divine Right* is always "bold teasy", and so forth). The IBM Selectric Composer makes this an easy matter. Still we're not always consistent as we should be.

In descending order of importance, our layout guidelines are:

accuracy  
clarity  
quantity of information  
appearance

Glamorous white space has no value in a catalog as accepts as occasional easy rest. I figure the reader can close his eyes when he's coming back.

I keep coming back to the reader/user because that's who the editor represents. I've had to let my obligations to *Parola Institute* to staff, friends, relatives, and to myself all be secondary. So are obligations to authors, suppliers, publishers, other editors. Usually they're not conflict, but when there is the editor has to see that the reader wins.

The editor's main mechanical task is determining efficient use of production time and page space. It's like spreading hard butter on soft bread, best if you cut the task into workable hunks and distribute them evenly.

I use McBee cards, one for each item, for rough editing. I know from looking at previous CATALOGS and the new material approximately how many pages should be in the set. *Nomadic* Section—61 pp. So I take the stack of McBee cards punch-coded for that section and break them down into categories—mountain stuff, car stuff, outdoor supplies, survival books, etc. Then those sub-plans are put in some sensible sequence. Then on a big table the cards are separated further into 61 little page-categories, by pairs (the reader sees 2 pages at a time, not one). The contents of those piles are written on my disk dummy. The cards are stacked in page sequence, and I've got a section rough-edited.

There are two main work government tasks to the wall—a calendar showing days of production and a page chart. If we have 8 weeks to do 448 pages, then we have to finish a signature of 64 pages every 6 working days, or about 11 pages a day. The signature—finished points—are marked on the calendar. I know how far behind we are and when we'll have to start working nights to get copy to the printer on time.

The page chart is big, a couple square inches for each page. On each page I write the basic information for the three layout people. As they finish a pair of pages they mark them off on the chart and look for the next ready pair. From the chart they get the number and name of the pages, the titles of the items laid whether they're new or to be cut out of old fates, plus the appropriate piece of *Divine Right*, and any headings.

In our production the editor, typist, cameraman, and three layout men work together. The editor tries to stay a couple days ahead of layout in line-editing the pages, and the typist and cameraman a day ahead.

When a layout guy has the copy all gathered he calls me over to see what the space situation is and determine what to leave out and what to retype or rephotograph as will fit. For her's finishing up he's called over again for any revisions and to try to catch the mistakes while they're easy to correct. Two other proofreaders also try while they're indexing before the page is flatted and sent to the printer.

Just before the signature goes off I get page-proofs for a last chance to correct errors and make the design more readable.

Some publications make all their editorial decisions by mutual discussion and consensus. I admire the ones who can make it work. I've gone the faster and possibly more limited route of strong central direction.

When we have a guest editor, every bit of the authority and most of the responsibility is his. Now that we're quitting, it's all yours.

## Layout

We use a tabloid sized page, like the magazines in the *Sunday papers*. *Steve Bauer's Divine Cookbook* was what convinced me it's a good format. "You have enough space on each page and spread (facing pair) of pages to lay out a graphic array of information, to make multiple visual relationships and plenty of freedom for the reader to find his own path through the material." It's a good format, but a web press. The two main disadvantages are that booksellers don't like the display space a tabloid book takes up, and some readers get tired holding the big page up.

(continued)



Composition. IBM Selectric Composer, Evelyn Goslow. Some type fonts are visible at lower left.

## IBM Selectric Composer

As far as I'm concerned this is the tool that made our operation possible. Instead of having to send material to a typewriter—a costly, standardized, and full-of-problems procedure—we can sit down with the layout people and editors and fit type precisely to the page with all the options of last-minute corrections. IBM offers about 140 different type fonts from 6 point to 12 point in size (you have to buy the fonts, \$30 apiece) which permits variety that would cost a fortune at a typewriter. We used 15 fonts for this CATALOG.

The Composer leases for \$150/month, a bargain if you're using it regularly or can rent it to careful people when you aren't. There is some special knowledge without which you will wreck the machine, but IBM can teach it to you in about an hour. The machine can, in its own typing, make the right hand side of your copy straight, like in newspapers, but since this saves no space and is no easier to read, I think you're wasting your time to do it.

The Composer is a fine machine, flexible and durable (we dropped ours on the ground and ran wrong sootage through it in the desert; it kept typing). To see one, look up IBM in the yellow pages under Typewriters.

—SB

Larry Whiteside from IBM fixing the composer. Free and fast repair service is part of the lease contract. We needed to call a repairman usually 3-4 times during a production. IBM can furnish service men anywhere, which made traveling production a lot easier.



The *Li Ching*: After supper, sitting on the porch in the final hour of light that day, D.R. threw the *Li Ching*. He had always been ceremonious when he cast the *Ching*; but that evening the sense of ceremony and ritual came on naturally as D.R. then it ever had before. There were no trappings. No candles, or bells or incense, none of that. There was only D.R. on the front porch of the house, sitting on the floor with his feet two steps down, the book beside him on the floor, and the coin lying loosely in his hand. D.R. was sitting quietly, waiting for the spirit to move him, and the spirit was taking its time. It wanted D.R. to really settle now, to fit into his natural place within the flow and motion all around. The day was ending, the night was on its way. The air was fresh and thick with the settling evening dew. Over by the silver-leaved maple tree some lightning bugs were blinking. And above them in the sky the first stars of the evening were popping out. Day and night were trading times and places, vying into one another's spheres around the world.

And D.R. sat, easy still and allowed a simple chance to happen inside him.

(continued)





Layout. Steamboat drawing dragons. George working on pp. 422-423.

## Layout (continued)

At first we laid out our pages just like a newspaper does (the Menlo-Atherton Recorder showed us how). We used flats (blank, line 2-page-sized pieces of paper provided by the printer) on light tables (made out of plywood, fluorescent lights, white plastic, and glass). The flats were placed line-side-down on the light tables, so the lines showed through and you could align items on them but they wouldn't show on the final layout. Also like the newspaper editor's lenses (also provided by the printer) to stick the items down—it was kept liquid in an old electric frying pan. The advantage of was it that it's fairly easy to lift an item and stick it. After everything was in place on a page we took a little wooden roller and ran it firmly over all the copy so it would stay attached to the flats.

We made the flats so that they could be used directly by the printer for making the negatives and the plates. Thus in the first CATALOG 1 and p. 64 were on the same flat, p. 2 and p. 63, p. 3 and p. 62, and so forth, with the even page always on the left. On this production we found it more convenient to layout the pages individually in page sequence, and tape together the flats for each signature when we were done (p. 62 and p. 120, p. 60 and p. 127, etc.).

We went along using light tables and wax until Gordon Ashby and Doyle Phillips revolutionized our procedure with the July 70 Supplement. They showed us that working on a portable drafting table, with a T-square and rubber cement for adhesive was really much easier and gave us better layout. We still had lines on the flats but they were on the top surface in light blue (invisible to the camera).

## So now our tools are:

Portable drafting table and engineers lamp

T-square and triangle (for horizontal and vertical lines and alignment)

Exacto knives and very good scissors (for cutting copy)

Rapidograph (for clean ink lines)

Rubber cement and dispenser (jar with brush), and solvent

(in a squirt can dispenser, for lifting already glued copy), and warts (sticky squares for cleaning up stray rubber cement on the page).

Drafting tape (for holding paper in place)

Thin white tape (for holding down bits of copy where rubber cement won't do it and for covering up mistakes)

Blue pencil (for marking on the page)

Templates (for ruling certain lines such as around Divine Right)

Leitran (burnish-down characters for page numbers and headings) and wooden stylus (for burnishing)

Tufflin (to burnish on finished copy for protection)

We still use the light tables for correcting copy. When the typist makes a mistake the simply types the line again correctly, makes a blue pencil mark, and goes on. Then on the light table it's easy to cut the copy, align the mistake line under the previous line, stick the pieces together with white tape, and go on to the next mistake.

We used to cut-mast each page with various column widths, which led to extra trouble for us and the reader. Now we use a type to a basic 2-column three-column page and everything's much simpler.

—58

## Books

We get letters all the time asking how to start a Truck Store and Diane's quick hard summary tells you the basics. "I'll try to tell you how to stock that store with books. There are a few how-to books on the subject of bookstores. The one I read is *How to Run a Paperback Bookstore* (R. R. Bowker 1962, \$5.00). It tells you enough to figure out backwards too and if you know nothing about bookstores, get it. Even if you do know something you might enjoy and it can help answer some questions like, how many titles should you make any year. This book helps to explain the minimum initial investment of \$10,000 though they suggest \$15,000. That may sound staggering and I do know people who've done it on \$1,000 but they started 5 years ago and are still in the red. It's really not worth the headaches. Running a store that serves the community and turns people on to new ideas is a far cut venture but don't forget that you've got to make a profit (I've not in business for our health you know...?).

## Tools of the Trade

Join the American Booksellers Association and with your membership (\$25 the first year) you'll get their Book Buyers Handbook. This gives addresses for all the major publishers and their discount schedules, returns policies and other good stuff. It's essential. When you join, tell them you want their MANUAL ON BOOKSELLING and other free stuff (you do have to remind them).

American Booksellers Association

175 Fifth Ave.

New York, N.Y. 10010

## BOOK BUYERS

## GUIDEBOOK

Bowker publishes the other essentials. *Books in Print* (\$25.50 yearly) is two volumes, authors index and titles index of current books in print with price and publisher. Their appendix of publishers' addresses is more complete than the ABA Handbook. *Paperback Books in Print* (\$29.95 yearly) has three cumulative issues in November, March and July which list current paperbacks by subject as well as alphabetically by author and publisher. There are also monthly editions to fill in between with reviews taken off the book's cover. *Publishers Weekly* is a great magazine and if you don't enjoy it, you're probably in the wrong business. The subscription is \$18.50 and aside from giving you general news of the trade, its spring, summer and fall issues are the most business-oriented of the listers of the books they plan to release that season. The weekly reviews of forthcoming books are devoted and entertaining. The magazine keeps you ahead of your customers. *Forums on Books in Print* (\$19.95) supplements *Books in Print* following the same author and title format and is issued 6 times a year. *Subject Guide to Books in Print* (\$23.50 a year) is in the form of an index by subject. For an additional \$8.95 you can get *Subject Guide to Periodicals in Print* which is a monthly. *Publisher's Trade List Manual* is a 6 volume collection of over 2,000 publishers' trade lists which is pretty impressive but its main use is by discount categories for making single copy orders and if you are not doing much of that or even if you are, you can still get by using some book's last year edition checking price changes in BIP. The cost is \$17.50 a year.

There are many more but these are the ones we have and I've listed them pretty much in the order of frequency of use. When deciding which to get, consider what services you want to provide to your customers.

## Polaroid MP-3 Camera

The production photography that I do for W.E.C. includes all halftones up to 3 1/2" x 4 1/2" and line shots up to page size.

Our halftones are done with a screen that has 85 dots to the inch. Really fine printing gets ink paper sometimes using screens with more than 200 dots/inch. Consult with your printer to find out what he can handle with his camera/what kind of paper in your production.

We make all our 3 1/2" x 4 1/2" or smaller halftones and let the printer make the bigger ones. We do them as velox (positive prints on paper) and paste them down directly on the flats. On large photos that we want especially nice we have the printer do in negative and strip into the negative he does of the flat.

Why not have the printer do all of the halftones? You can. It won't cost anymore. In fact, it may cost less. We like to do our own, though, because it gives us control, reduces the problems of getting all the stuff to the printer in good shape, losing material, and getting the wrong picture in the right spot. We also get to see exactly what the page will look like.

The Polaroid MP-3 with lights, film back, halftone kit, and 5" lens costs about \$800. Film, depending on type, costs \$13.50 to \$15.50 per box of twenty sheets (60¢-75¢ per picture). After working with the MP-3 for 1 1/2 years, I average 2 1/2-3 shots per good halftone, 1 1/2 shots per good line shot. That's working with varied copy. If I have a series of originals to be done to the same size, I can arrange them by contrast and average maybe 1 1/2 shots per good halftone.

That assumes that I have good film. I had no trouble with the Polaroid film the first year I used it, but during the last six months, quality has been extremely variable.

## Stat King

We bought a Stat King Graphics Stat King camera for doing work up to 11" x 17". It is a fancy photostat machine that will enlarge/photostat 200%-500%. Cost \$4000. It can have wet out and dry in 5 minutes or so. We wanted to do halftones with a contact screen but it didn't work in enough (the contact screen in the vacuum back) so we use it only for work. Fair cheap to use, but we don't use it enough to be worth another year \$4000.

—Fred Richardson

## R. R. Bowker

1180 Avenue of the Americas

New York, N.Y. 10036

## Kind of Books

Books are not just books. There are obviously hardback (cloth) and paperbacks. There are also text, trade, and mass editions.

Text editions are not simply the books you read in school but rather are designated by publishers as texts and sold to bookstores on a very short discount, generally 20%. This small discount is the reason most stores don't carry text books. The Truck Store is an exception. Trade books are the largest category of books and they, like texts can be either hardback or paper. Book stores get the most generous discount on these, generally 40% or better. Trade paperbacks are termed quality paperbacks. Mass books are weird and if you buy them from a distributor, which you are almost forced to do, you get only 30% discount. If you can buy direct from the publisher you get 40%, but more about this confusion later.

## Where do Books Come From

You buy both direct from the publisher and from wholesalers (known also as jobbers or distributors). The best way to find out about wholesalers in your area is to ask around at friendly stores. You will find that most wholesalers deal mainly one kind of book, that is, trade hardbacks, trade paperbacks (call these guys quality jobbers) or mass paperbacks (the last are a special case and will be dealt with in their own section). You'll need accounts with all 3 kinds. At the Truck Store we do most of our business with publishers and use wholesalers only to fill in. There are advantages and disadvantages to this.

Wholesaler advantages: They are regional and thus can give faster service and shorter delivery times. Less postage and freight costs. Since they are smaller operations they are easier to deal with and adjustments in billing or invoice errors are handled more quickly and returns are made with no hassles. So there's less time and work as you are dealing with one firm rather than 20, so there's just one invoice and one bill. This saves an incredible amount of time.

Disadvantages: They either don't stock what you want or are out of it and won't back order (that is, record your order and send it when the books come in). Their maximum discount is anywhere from 36-40%. You must pay 30 days from date of invoice.

Publishers advantages: They do have the books you want and they will back order. They may let you must pay in 30 days but allow 60 to 90 days with no cash discount. Their price is the best. They offer form orders, catalogs, advance notices of new books, and a salesman on call. Salesmen lay raps on you about why you should buy 25 copies of everything in their line but also they help you stay on top of it, assist in getting your returns permitted, and some times they'll give you free books or take you out to lunch. Publisher's is the most important advantage is their better discounts. They generally have a minimum order of 5 books to get a 40% discount but from there discounts go up. The schedule varies with every publisher and is fully detailed in the ABA handbook. WORKING WITH THESE DISCOUNTS IS WHERE YOU MAKE YOUR MONEY!!!

Publishers disadvantages: Unless you live in the East you have to wait at least 3 weeks for delivery and pay that long distance postage or freight, though a few publishers have regional centers. If you are in a rush say in red letters and ask for "special handling" book rate which is not too much more expensive and can speed delivery by as much as 10 days. Their bills are often computerized and each account merits more invoices and more bills to pay and it is a lot of paperwork. Getting return permissions is slow and getting your credit on returns is slow but we feel that the better discounts we get from publishers offset these. One other disadvantage is that there is the minimum order to earn their discount but a way to get around it is the single copy order plan (SCOPE). Essentially you and in a check with your order on a special order form and the publisher gives you a better discount than he would otherwise (see the ABA Handbook for details). We use this for the few super expensive books we stock rather than invest money in keeping them around the store collecting dust.

(continued)

## PACKAGING SIMPLICITY

## JIFFY PADDED BOOK BAGS

Available to you from 200 distributors from Coast to Coast. [www.cocostore.com](http://www.cocostore.com)

JIFFY MFG. CO.  
HILLISLE NJ 07025

Polaroid MP-3 and Fred Richardson during January production in the desert. In the foreground are cans of Omit, pressurized air for cleaning glass surfaces.

## The Mass Book Rack

We have found that once you deal with a distributor of mass books the mass publishers are reluctant to sell to you. (I think it's some sort of distributors' code.) Most distributors have some advantages in that they are everywhere there are magazines (that's the other side of their business) so there is probably one near you. This means that you can call on an on-again day and can get it done in two days. Delivery is quick if not free and you can even pick up the books yourself. Ask and maybe they will let you take a shopping cart around and pick the books off the shelves yourself (check out their nude magazines while you're there). Returns are also done with no hassle. None of these things do the Trade Store. We don't even carry very few mass books but if you are doing a more general store you will find these things helpful. However they quite often don't stock the books you want as the trade of their business is to deal mainly with drug stores and magazine stands and they are not easily persuaded; if it doesn't sell at the corner grocery they won't stock it. **THE ONLY ALLOW 30% DISCOUNT** and sometimes less which is hardly worth it to get by on. If you do mail order you can save money.

## How To Get Around This (Maybe)

If you are just starting I suggest that you set up accounts with mass publishers from the beginning telling them you are a new store. If you try to direct you toward a local distributor tell them you're not interested (most books will deliver before we open and many boxes of books have been reined out). Then, when you are established, see what kind of service the local guy can give you. This way at least you have an option. If you've already been buying from the distributor and want to order direct, send in an order to the distributor. The minor mass dealers before we opened many of our direct because their local distribution isn't very good but with the major publishers this probably won't work. Another tactic would be to use the order form the publishers send out with promo material (you might have to write a letter telling them to put your local distributor list in the order form listed in Publisher's Weekly as a new store accomplish this, not a bad thing to do.) They might just fill your order automatically or they might send it back to your local distributor to fill. But if they do fill it they cannot legally refuse to ship future orders direct, though they might.

Another tactic is to get in touch with their salesmen (though being regional he may be far away) and get him to send in your order or a letter advising your order. He'll be somewhat sympathetic as more orders mean more money for him and it will look like he's really doing his job. The problem here is that he probably isn't, and you may have some trouble finding him. The main office may tell you who he is or send him your way or you could ask other salesmen, bookstores, or maybe quality distributors. I wouldn't ask the mass distributor as he may catch on that you want to take your business elsewhere.

## Some distributors:

Ray Sargente (3640 Walnut, Boulder, Colorado 80302) is a western wholesaler that carries both quality and mass paperbacks. Their discounts are straight 30% on mass and 40% on quality with a minimum order of 25 books on each. They are a good firm to do business with when your local guy doesn't have what you want and you are doing battle with the mass publisher.

Book People (2940 7th St., Berkeley, Ca. 94710) is a quality paperback wholesaler. They are unique in that they carry a lot of small press. They have a free catalog.

L & S Distributors (1161 Post St., F., Ca. 94109) carry a lot of the same publishers as Book People but I'll order there and let them to have books in stock more regularly. They give good service and we use them a lot.

Baker & Taylor Company has regional offices (Somerville, N.Y. 08876; Monmouth, N.J. 08054; and Reno, Nevada 89502). They carry a very complete line of hardbacks, including text editions, and a limited selection of trade paperbacks.

The East Coast is full of wholesalers of all kinds of books. Check the telephone books for names of mass distributors, either under Books or under Magazines.

There are lots of things I didn't talk about, most of which are contained in HOW TO RUN A PAPERBACK BOOKSTORE. Things like stock control, checking invoices and paying bills, making returns, setting up credit and budgeting have to be learned and systemized as you go along, everyone has their own way of doing it.

One prime piece of advice to those of you who've never run a bookstore before would be to yourself a job for a while to apprentice or if you can't do that try and hire someone who knows something about the business. If you have any specific questions you can write to us and we will try and answer them. Please don't send orders to us and expect us to fill them at a discount as we are a retailer just like you. Good luck.

—Laura Besserman

## The Quick Hard Summary.

In the September 69 Supplement, Stewart boldly invited anyone who was thinking of opening a Whole Earth Store to write to Hal for a quick hard summary. We've since had many inquiries & various of our staff have written numerous more or less quick & more or less hard summaries. Here's a sort of composite of all that information. We've also told folks to write to the two going stores we now know of, & they've been very helpful:

Whole Earth Access Co.

2465 Shattuck

Berkeley, Ca. 94704

(415) 848-0510

Whole Earth Cooperative

605 East Johnson

Madison, Wis. 53703

(608) 256-8828

## The Quick Hard Summary

First, get lots of money to start with. Ideally, enough to run on for at least six months, preferably longer, & assuming whatever you make during the first twenty months will go for unforeseen expenses, which there always are. A very rough minimum estimate is \$10,000; it depends a lot on how much space you want to occupy & what you plan to do with it. Basic necessary expenses are: rent—often first & last month's, plus cleaning deposit may be—utilities—gas, electric, phone, water, garbage, some deposits required; insurance; equipment & supplies (possibly cash register, adding machine, typewriters), forms, paper, notebooks, files; see permit from your city—most books (\$10–\$50); furniture & redecorating: desks, tables, chairs, shelving, display area, signs, etc. (A lot can be done with used stuff). If you don't have them you'll need tools—hammers, saws, etc. And paint. Salaries—possibly the largest single item, unless people work for free, which tends to breed poverty & discontent.

Now—assuming you have some bread, or think you can get some—find a place. Not too high rent, but hopefully somewhere where people walk by a lot. Don't sign a lease until you have a friendly lawyer check it—most agencies use standard forms that are designed to screw the tenant, but you can change clauses you don't like if they want to rent the building. Next: apply to your town or city for a use permit, which often takes a while to get. Without one you can be shut down forthwith. Apply to your state for a resale permit, same reason. Invite your local building inspector & fire inspector to come inspect—before signing a lease, if possible. Because—if you're in an old building, you may be required by law to make changes in wiring, plumbing, fire leaks, etc. at your own expense. Again this is preventative—later harassment can come from these areas, & you have no recourse. Again, a good friendly lawyer can be a lot of help in knowing local ordinances, etc. Also, lots of towns are zoned so that you can only do business in certain areas. Find out about zoning before renting.

Hopefully when you start getting your building into shape & see how much space you have, you can start ordering stock. A good idea is to figure out how much it's going to cost you to keep the physical place & the people going for six months. Then set how much money you have left & order your stock accordingly. You'll probably have already opened a checking account. If you've got to stock books, join the American Booksellers Association—\$25 gets you a manual of publications with info on almost all publishers—their discounts, access info, credit terms, policies, etc., free advice; & so forth. You can also file a statement of your credit with their affiliated group—the American Book Publishers Council; whenever you open a new account with a publisher you

just tell him your credit was established there, he looks you up, & things are speeded up considerably. Usually publishers & suppliers require payment in advance on your first, or first several orders—after a while you can order, be sent on books, & have 30 days to pay. The more you order at once, the better discount you get—it's a question of working up to where you're selling enough that you can afford to order in larger quantities. It takes an average of a month for orders to arrive. By the way, when opening accounts, please make it clear that you're not connected with us—we've had trouble already with publishers putting other people's accounts on our statements, because of similarity of names.

What to sell? Depends a lot on you. We do mostly books & that's what we know most about—also some merchandise (Ashley Soto's, Corona com hat, Aladdin lamps, Snuggly baby carriers, etc.) & a few magazines. A lot of the people who've written to us are interested in health foods, art & crafts, & toys. Selling food requires special permits; that's about all we know. You can often get local art & crafts on consignment (you pay the artist when the item is sold), which can save you some basic stock expense. A lot of thumb in ordering books is that cheap paperback sell the most—you can be sure of selling more of them than of the more expensive hardbacks. The Catalog tells of our bestsellers, could probably be yours too.

OK. If you get this far—plan a gala opening for publicity—invite Everyone & serve cash (homemade) goodies. Word of mouth is best advertising we've found. But you can put up posters, flyers, whatever. Try to get your local newspaper to do a feature on you. Smile a lot.

We'd like to see a Whole Earth Store in every town. Yeah! But before you start, be sure you're ready to do business—you will need to handle with publishers & suppliers, keep records, mess with forms, numbers, paperwork. You will need a lot of human energy—someone has to do: ordering stuff, keeping track of what comes in, selling stuff, bookkeeping, cleaning up around the joints, correspondence, typing, filing, building or buying equipment, furniture, painting, keeping track of what you have & what you need (inventory), business with landlord & miscellaneous officials, decision-making, paying bills & payroll, etc., etc. Our aim here is not to discourage anyone, but to encourage open-eyedness about the prospects.

—Diana Shugart

## AAA Adding Machine Company

I wish we'd known about this outfit when we started business. They carry used and reconditioned calculators, adding machines and cash registers at good prices.

—SB

## Catalog

## FREE

from:

AAA Adding Machine Company  
26-08 Jackson Avenue  
Long Island City, New York 11101

## Ken/Keeping Still, Mountain

"Beginning in his mind, then flowing down along his spine and outward through his body, the change came slowly over him. D.R.'s hands waited for it to be complete. Then, on their own, unhurried, they began to toss the coins. Six times they shook and dropped the coins, and the string materialized."

"The image of this hexagram is the mountain, the youngest of heaven and earth. The male principle is at the top, because it strives upward by nature; the female principle is below, since the direction of its movement is downward. Thus there is rest because the movement has come to its normal end."

"The hexagram signifies the end and the beginning of all movement. The back is named because in the back are located all the nerve fibers that mediate movement. If the movement of these spinal nerves is brought to a standstill, the ego, with its restlessness, disappears as it were. When a man has thus become calm, he may turn to the outside world. He no longer sees in it the struggle and turmoil of individual beings, and therefore he has that true peace of mind which is needed for understanding the great laws of the universe and for acting in harmony with them. Whoever acts from these deep levels makes no mistakes."

Stranger In A Strange Land: D.R. tried to read that novel by

laughter after he went to bed, but he was too sleepy to pay

attention.

Some other time, he said to himself.

And he blew the lamp out and went to sleep.

## MARCHANT \$99.00

Automatic carriage return • Carriage tabulation, preset decimal as well as multiplication • No repeat or non-repeat keys • Automatic identification of 1/2 division • Complete carry-over • Exclude keyboard check-out • Complete in line 3 figure proof.





Some of what happened around here for the last three years.

The **WHOLE EARTH CATALOG** got started in a plane over Nebraska in March 1968. I was returning to California from my father's long dying and funeral that morning in Illinois. This had set ahead of the plane while I was reading *SpaceShip Earth* by Barbara Ward. Between chapters I asked out the window into dark nothing and slid into a reverie about my friends who were starting their own civilization either on the yon in the sticks and how could I help. The L. E. Benn Catalog of outdoor stuff came to mind and I pondered upon Mr. Benn's service to humanity over the years. So many of the problems I could identify came down to a matter of access. Where to buy a windmill. Where to get good information on bee-keeping. Where to buy a hand on a computer without forsaking freedom.

Shortly I was fantasizing access service. A Truck Store, maybe, traveling around with information and samples of what was worth getting and information where to get it. A Catalog too, continuously updated, in part by the users. A Catalog of goods that could be nothing to the suppliers and everything to the users. It would be something I could not come years into.

Amid the fever I was by this time, I remembered Fuller's admonition that you have about 10 minutes to act on an idea before it recedes back into dreamland. I started writing on the end papers of Barbara Ward's book. Inevitably I finished reading it.

The next morning I approached Dick Raymond at Portola Institute with the idea. I'd been desultorily working for him for about a half a year, had helped investigate one costly failure (an "Education Fair" which aborted), and was partly into another doomed project I called E-I-E-I-O (Electronic Interconnect Education Initiative Operation).

I told him this Access Catalog was what I wanted to do now. Dick listened gravely and asked a few questions I had no answers for (Who do you consider as the audience for this catalog? What kind of expenses do you think you'll have to pay? What will be in the catalog? How often would you publish it? What kind of copies?) All I could tell him was that I felt serious enough about the project to put my own money into it, but I was not sure yet. I wanted to move into the scheme gradually, using Portola's office, phone, stationery, and finances (which were Dick's personal savings, dwindling fast). He said okay.

For over a year Portola Institute had been nothing but Dick, a secretary he shared, his office, and a few expensive projects with big ideas and little to show. So he rented a nearby set of cubicles that some architects were moving out of, to give us more room. Dick made mistakes in it. I was working in my cubicle several weeks later when Dick learned in the door and asked, "By the way, what do you think you'll call it?" My head filled with the best success I'd had: a 1968 photograph of the whole Earth campaign, which I felt was still incomplete. I told him, "I dunno. Whole Earth Catalog, or something."

My activities at this time were mostly visiting groups of books and looking at books. One Dick's friends at the Chicago Book Store in Pacific told me I could get single copies of books from publishers if I joined the American Booksellers Association, a commitment of \$35. Shortly after that I met the big store (holding my breath) spent \$60 on note-a-gram stationery from Modern Business Forms. Dick helped me open a commercial account at a bank.

I was operating without pay but keeping track of my time, to pay myself back-wages of \$5/hour if we ever started to part. In July 68 I printed a mimeographed *Whole Earth Catalog* "partial preliminary booklist" of \$12 gathered up for [Tandra, Art, Cybertics, The Indian Tipi, Recreational Equipment—about 120 items]. With samples of each in the back of our Los Angeles and I set out to meet the market—family communities in New Mexico and Colorado. In about a month the Whole Earth Truck Store did a stunning \$200 of business. No profit, but it didn't cost too much and was good education.

On return in August I hired an employee, Sandra Tschepner, who worked about part-time to type and busy my conviction that something was going on. In September 68 and I moved into Ortega Park (formerly Rancho Diablo), 70 acres and house newly leased by Portola Institute as a teachers' laboratory. I was a housekeeper and I was caretaker in an empty mansion. It was a plush time.

Dick Raymond had introduced me to Joe Bonner, a talented teenage artist looking for work. He preferred to do layout than write for Portola so I took him to Gordon Aubrey's design studio in San Francisco for a 10-minute course in layout. In October 68 we started production on the first **WHOLE EARTH CATALOG** in the garage at Ortega. Sandy fell in love with the IBM computer while Joe reeled together right tables out of scrap plywood. We got some electric heaters at Joe's. Joe was a typewriter, a typewriter typed, and I researched, reviewed, edited, and photographed. Whenever the typewriter, heater, camera light, and fry pan of wax were on simultaneously the electricity went out. I spent an hour on projects like making an exotic border with the compressor. A leisurely production. A month or so for 64 white-jazz pages.

We had the contents printed at News Publications, a newspaper press just down the street from Portola Institute, and the cover printed at East Wind in San Francisco (using the picture from a Whole Earth poster we'd already had them print), and the binding done at another place, with us doing the transporting between. It was a terrible arrangement. The 1000 copies we printed were a huge chore to cart around.

Our real luck was in finding Novels Publications and Bob Parks. I've never met a man I'd rather do business with, and to find a printer who is fast, thorough, cooperative, creative, honest, and inexpensive is just unheard of. We had our **WHOLE EARTH CATALOG** printed elsewhere and regretted it.

I only dimly recall what we did with that first **CATALOG**. We sent them to the 50 or so subscribers we'd got with our preliminary contact. We carried some around to stores, who didn't want them, not even on consignment ("Too big. Too expensive. What is it?") We traded some with other publications like *The Magazine of New Schools*, *Explorers*, *Trademark Log*, and *Green Revolution*.

Meanwhile we were starting a store. Dick Raymond had had his eye on the building at 558 Santa Cruz, just across the alley from the cubicles I'd rented. Formerly a USO, then a furniture store, then a printer's, the place had apartments upstairs and 4000 sq. ft. of it, big no-nonsense downers and a nice store from the top had failed and the building was going to be sold. Dick got with the best buyer and worked out a 5-year lease for the downstairs part at \$450 per month. We felt like we were really into the soup now. Five years! That's 1973.

At Thanksgiving we'd met a girl from New York named Anne Helmutz who had some familiarity with the publishing world, mostly on the left. She was hired to do a book on the publishing and help with research and typing since Sandy had left for woolier work. We found that she was telling our own distribution was going to be impossible (booksellers wouldn't pay what they owed and hassled us with endless bitter arguments). Anne started looking around for other alternatives.



What I'm visualizing is an Access Profile (access) with the best of all manner of access materials, a advice for safe cheap, including performance art, cheap books, daily musical and noisy equipment, catalogues, design plans, professional workshops, etc. equipment (4 other authors, equipment - some elements of books here). Prime item of course would be the catalog. Prime item would read show. Educational materials, self education books, another education, everything but small scale access. The old course a large source is the product.

reaches I would prefer to offer at most 2 off any item. (2) The best, cheapest.

Techniques and kinds of the self-education. Be the self-education.

On the way, carried in the catalog, have a fast turnaround by credit. Encouraging others to do it.

Would that be any more, or any more, and any more, to suppliers, I don't want a goods, but only a reference.

Suppose the trading store was a contact and energy exchange.

The Whole Earth appendix to SpaceShip Earth

In December 68 we moved into 558 Santa Cruz. There wasn't much more—a chair and some books. Joe set up work with free space wood making the store a funky painted wooden place. We sublet an office in the store to Dave Shapiro and a space in the back to lawyer Jim Wolpert. That cut our rent to \$250/month. Joe mowed disks and tables out of doors and 2 x 4's. We never got around to changing the house from institutional to home.

From the beginning the pretty little hard core girl Lol, who still has to show her ID to bartenders, was the Indian eye of the business. She spelled her math background to our bookkeeping, and her three tongue to our business and forgotten promises. She had the administrative qualities you look for in a good First Sergeant. In my experience every working organization has one overworked



Arthur and Julia Brand

underpaid woman in the middle of things carrying most of the load. None of the rest of us ever cleaned the bathrooms. Lois cleaned the bathroom.

Annie was the City Lights bookstore in San Francisco one day talking to Shig the manager about where to look for a distributor. Shig suggested a new long-haired outfit in Berkeley called Book People. Annie went to them and was immediately taken with Don Gerrard and Don Burns. Pretty soon Book People was our distributor, and that was a big relief. We made no contracts or vows, but the **CATALOG** stayed with Book People as sole distributor until the March 71 Supplement (when the Realist took half the distribution).

In January we had a grand opening party at the store, though we'd been open for a couple weeks ("There's a customer in the store," we'd whisper in the back room.) Anne and I invited all the newspapers and were surprised and hurt when none of them showed up. It was a nice party anyway. The readership was a small sort of cult, then, most of whom seemed to know each other, or wanted to.

Also in January we produced our first "Difficult But Possible Supplement to the Whole Earth Catalog." It was a 32-page newspaper collection of friends' letters, old pamphlets like Bob Hoffman's "Fuck the System," a solar heater, new **CATALOG** suggestions. We made it at the store.

About this time Tom Duckworth joined the scene. He lived in a truck with Connie and their kids. Moon had a place to park at Ortega. His dream was to really do a travelling truck store. In March we gave him a shakedown cruise to New Mexico when the Whole Store came over to ALLOY (p. 111). If I had to point to one thing that contains what the **CATALOG** is about, I'd have to say it was ALLOY. We put it at the March Supplement, along with how much the Supplement cost to make, which Steve Bae had suggested at ALLOY. A good practice. We never regretted it.

When we started the **CATALOG** I imagined that it would be the month of work, then an easy month to travel around and get the month, then a month of work, then... but it wasn't working out like that. None of us knew how to run a store and we were learning the hard way. We couldn't seem to find a mailing house that would do even half decent job of serving the subscribers. We had to try three places, each at big expense.

Our hassle with the Post Office, which continues to this very day, was in its surreal beginnings. (We're a periodical, in every spiritual and legal sense. Periodicals are mailed Second Class, a faster, surer, and cheaper service than Third Class, which is June Mail. The classifications man in San Francisco said, "It says Catalog right on the cover. Catalogs go Third Class." Dick Raymond cleared his throat. "The Rolling Stone," he said. "It's not a stone. Through endless appeals the thing has climbed, letters to our congressman Peter McHenry, rulings, and rulings, to current result: We have to send this LAST **CATALOG** to your Third Class. When a mail truck gets stuck in the mud, Third Class is what they throw under the wheels.)

(continued) →

#### THURSDAY: PHONE CALL

By morning, though, D.R. was thoroughly animated again, restless and filled with energy that just knew there'd be a letter for him in the mail that day. He felt it so strongly he couldn't get him on any work he tried around the place. At ten thirty he gave up trying and took off half-running down the hill to the store. And sure enough, waiting at the post office was a letter from the Anaheim Post.

#### Divine Right.

1. Man, you have blown me out.
2. The telephone is more civilized than letters.
3. Letter-writing closes up my last century.
4. Estelle has been at it since the place of weeks.
5. She may not be there now.
6. Here's I sent your letter to Angel's place anyhow.
7. That's all I know.
8. But I'm 200 bucks.
9. Don't spend it all in one place.
10. And for Christ's sake, use the phone next time.

(signed) A. Flash, Esquire

Right on, Dick D.R. to himself.

(continued)



## History (continued)

About this time Lois and I started living in the store. Joe and Annie and I, with editorial help from Lloyd Kahn, did the Spring 68 CATALOG production amid the busy din of the store, a bad mistake. The CATALOG was twice as big and a dollar cheaper. To clear my head after production I hitchhiked to New Mexico for what turned out to be the Great Big Race (p. 248). Joe and Annie also headed for the desert, spending rendezvous in Albuquerque for the July Supplement production.

You should know that all this time Portola Institute was going through continual interesting changes that someone else is going to have to write about. Dick Raymond did one especially nice thing for us: he projected us from the vicissitudes.

Store and mailorder business was gradually picking up, so we hired Hal Hershey, a friend of the Duckworths who had worked in bookstores. We also hired Diane Shugart, a close buddy of Lois' and mine. At the store we had a chart on the wall that showed our income and expenses for each month. The income was gradually catching up.

While we were having a good July production at Steve and Holly Berry's house in Albuquerque, Hal and Diane were starting to face a heavy current in Menlo Park ("52 subscriptions today!"). Philip Morrison had written kindly of us in the June 68 Scientific American. We were being mentioned in a lot of underground papers such as the East Village Other. And then Nicholas von Hoffman wrote a full page on the CATALOG that got syndicated all over the U.S. We were caught. We were famous.

(One interesting note: Of all the press notices we eventually got, from Time and Vogue to Itzchak... in Germany... to the big article in Esquire, nothing had the business impact of one tiny mention in "Uncle Ben Set" in the Detroit Free Press, where some reader asked, "How do we start a farm?" and Uncle Ben printed our address. We got hundreds and hundreds of subscriptions from that.)

Hal and Diane hired more people. Deposits at the bank were more frequent: the bank officers got more polite.

In September Joe and I returned to Oregon to go to work on the September Supplement. Annie had stayed on at Lema, so we hired a Kelly Girl to do the typing. As I was driving up the hill to work one day it suddenly hit me that I didn't want to. Instead of golden opportunity the publication was becoming a grim chore. I considered the alternatives of taking my medicine like a good boy or setting about passing on my job to somebody else. I'm sure I

## Sound Criticism

What in the Hell is the Big Idea, anyway, threatening to cease publication of the Whole Earth Catalog? Why, you characters have hardly even started! What if all the telephone companies suddenly

## Fidelity Executive

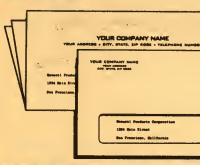
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A good source of cheap, functional business stationery, note-to-grams, address labels, business notebooks, etc. Catalog free.

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265 Regal Road  
Dallas, Texas 75221



Every noon, volleyball at the store.

ughed unhelpfully. And then this other notion glimmered. Keep the job, finish the original assignment, and then stop. Stop a success and see what happens. Experiments going as well as coming. We printed in the September 68 Supplement that we would cease publication with a big CATALOG in September 69.

Meanwhile business was still growing. The morning mail was a daily heavy Santa Claus bag. We hired Tracy McCullum, Peter Ranner, Mary McCabe (a bit of uptown glamour amid the Hari), and a guy named Fred Richardson who had amazing talent for handling the world's hardware. Bernia Sprouch and Megan Raymond came in periodically to handle our increasing load of printing and flyer-mailing and other chores. We were having group lunch at the store by now, Lois and Diane dishing it up.

I actually thought I could hit LIFERART EARTH (p. 35) in between the September Supplement and the fall CATALOG. Setting up the event was even harder than setting the store. Then starting for a week was no way to recuperate. Dumb.

I went from the LIFERART straight into Fall CATALOG production. We were late, so we had to do it in two weeks. Fred was going to take over the camera. We had a hot new typist, Copy McCune. We had a big new Star-King that would do work King brought in his brother Jay to double our layout speed. We worked 80 hours a week. We got to the printer on time.

Then Christmas was on like a cat on a mouse. Everybody was overwhelmed at the store another burst of hiring, practically whoever came in the door. Les Fasin the bookkeeping ex-Marine, John Clark, Russell Bass, Jerry Finn, Alan Burton, Leslie Acosta, the bookkeeper Laura Bensman. Fred was cooking lunch. When Tracy left to Canada, Pam's husband JD came in as manager. Everybody should have one; they really get used.

About this time I went over some edge. Minor tasks became insurmountable obstacles. The thought of another year of the store with no hopes, I couldn't walk right. It was a nervous breakdown, garden variety. I'd never had one before so I thought I was dying, which stirred up a snowdrift of phobias that took more than a year to disperse. I'm not happy to mention this, but it seems an important part of the bookkeeping we're doing here.

In retrospect what I particularly appreciated was Dick Raymond's help and comfort, which was none at all. He's an unusually merciful soul. He said out loud to Esquire, "You have to let people have their own nervous breakdowns." Correct.

(continued)

decided to stop printing the yellow pages next year? What if Suerets suddenly decided they'd stop updating those huge catalogs each year or so? Where would we be? And don't put forth the argument that "we'd probably be better off because somebody'd probably start a new Yellow Pages that would probably be better than the last ones..." because only you know how much money, time, effort, loyalty, &c. and there are required to compile and operate such an Information Processing Center... and now that you've got the first touch of momentum in the Machine you're going to turn it and make some child of innocent interest create some new plaything to amuse yourselves and depress a lot of the rest of your fellowers because just as we get the hand you're turning your Outer Ripples you'll Cop Out on us. If there was even an Edlin Plan, a commitment to Irresponsible Action, it's the decision to cease publication of the Catalog in 1971 which ME Brand had the audacity to suggest in a recent interview with TIME Magazine. What if Mosher and after 3 months or so of carrying The Weight: "Well, if Baby can't go it on his own from here I haven't been much use..." But as I hope you have noticed, really responsible mothers hang on for at least 5 months (if not 15 years) and then, knowing when to shut up, they do it.

I don't know how much it's coming through to you guys yet or not but your rad jiggling the Folds down on the Form... you've pioneered a whole new concept in Information reduction on the distribution: "The Catalog With A Soul." And as you might gather from your sales increases over the last 15 years there are a hell of a lot of other eyes gawking your rage. For example, there're a lot of single school (particularly those tied up old grade schools) that isn't absolutely little ground for you to pick your Circumstances. (The kind of Denial Mentality which in your format and attitude you've begun to succeed in showing is gawking and unstable on nearly everybody's scale... and the kind of Group of Self-Reliance on families you've prodded is so goddamned vital you just can't give up without realizing the Full Implications, the Total Possibilities of the Little Bomb you've set off.

If you had the nerve to call it The Whole Earth Catalog, why the hell isn't it going to be A WHOLE EARTH CATALOG... a World Source with a World circulation, a World Exposure of World Contributors (have you considered the prospect of a WEC in every U.S. Embassy as a start)? A World Institutions, Stars and Roadbook did it with a much smaller here... and you don't have much the merchandise! Here I am in Soggy Old England and I've told the Catalog to the First Five people I've shown it to except they query "Where can I get these goodies in England?"

1971 is not the year for you to fold up; 1971 is the year for you to start a New Growth Phase... to show that your concern is even more generous, even more thought-out than you'd have as before at the moment. How about that: twice a year an Expanding Universe in my mail box! What New Forms can the Whole Earth Catalog take on? Maybe a separate edition for such major categories of information, sources, and items as reviewers and contributors expand the range. Or how about a Teflex station at WEC to that the backlog of old information from old issues and reviews which will save pile up at an astounding rate could be tapped by a subscriber anywhere in the World when he needs some material and, as well, reviewers might click in a review when the P.C. eventually prunes too slow. The Supplements: in addition to the sort of Interface they are now, could continue to be sort of Reporters At Large for the World... and Builders but on a much broader scale, reaching beyond the Western United States and extending our knowledge of Process/Idiot by connecting up with other farmers of the World. (You know that the first European Conference on The Environment was just held in Strasbourg?)

You see, of course, it is just as important that you publish the Catalog as what you put in it... you are a vital Priority Distillery: Education, Tools, and Appliances for Self-Reliance and you document that very process of distillation there... making a Design as an entire side of the Evolutionary Coin. Now, as never before, because of Extraordinary Deviance, one man's Special Sign can be shared by many more who see a little better because of his effort in our struggle to become ever (a) Blind, (a) the Vehicles which bring the Foundation there Special Sign to us are the much needed lenses or dials... extra eyes and extra ears to help us make our way in the Dark. As any designer knows... you cut off the Source, the Inspiration... and you cripple the Product, you trip the Effort.

So, goddamnit, GROW UP. (or at least justify your suicide.)

Very Sincerely Yours,

Gregory Groth Jacobs

London

I littered through the January 70 production and then asked Guy Norman to handle March. He did, and with balls on. Guest editorship had come to Whole Earth. Joe Hersey left on the mystical road, and I was worried, but Hei Hersey more than filled his shoes on layout.

In January Fred built a volleyball court in back of the store. I was too fucked up to play on it for a while, which grieved me, because volleyball instantly became a valuable part of the store routine. We played two games after lunch every day. It improved our health, got us out in the weather, loosened our tensions, and — honest to God — built character.

Since we were playing on paid-for time, we naturally tried to stretch out the game, so each day the players spontaneously arranged themselves into always different but equal teams. Lunch and volleyball kept us well acquainted. They, and the morning mail-opening sessions. We had some newcomers — Mary Jo Morris, Soni Stove the good cook, Austin Jenkins of good cheer.

On the Spring CATALOG we went up to 144 pages and lowered the price further to \$3. (Later a friend at Stanford Research Institute said he made the calculations one afternoon and figured out we would make the most money with a \$4 price tag. Or \$3.95, as they say.) A new face on Spring production was Steamboat, who seldom spoke but could draw volumes. (Tuesday's Child on p. 23 is his. So are the dragons.)

In July Lois and I left to see the world and Expo and the Bakers in Japan. My old (and favorite) employer Gordon Ashby took on the July Supplement and totally changed our layout ways. JD, Nebraska's Merlon Brandt, kept a strong crew busy at the Store and started gathering material for the Fall 70 CATALOG he was going to edit.

In September 70 Guy came back from a summer in Kentucky with Wendell Berry and put out what came to be known as the Creeker issue of the Supplement. The BD-4 airplane kit we'd ordered started to arrive, and Fred and later Todd and Doug and Bob saved and filed and puzzled and riveted it in the back room.

Don Gerrard had left People and among his other projects was trying to find a big distributor for the LAST CATALOG. We wanted a contract by Christmas. Nobody in New York seemed very interested.

There were strong family feelings in the Store by now and a desire to do something else together. A restaurant. When the teacher's lab at Ortega finally failed and quit, JD and I pressed to get it as a home for most of the Truck Store staff, a commune. Ideism

ruled the air. It was never a very successful commune; it was plenty educational one.

As Fall production went on up the hill in the garage there were new laborers in the store. Harold Hoyt, Dudley DeZonia, Francine Slate, Terry Gurnach, Diane Erickson. People's children were in the store more often now. Marilyn's kids, Francine's, Diane's, Pam's. I was buried in the back office starting the long haul toward the LAST CATALOG.

At Christmas there were memorable parties.

In January 71 some of us suffered to a remote unnamed desert hot springs for an adventurous Supplement production.

Don Gerrard had gotten good offers from Dutton and Random House for distribution of the LAST CATALOG. We decided to go with Random.

I asked Richard Brautigan, Ken Kesey, and Paul Kressner if any of them would like to edit the Merch Supplement. Brautigan said he was already involved in a quaint project, writing a novel. Kesey said he would edit if Kressner would, and new levels of offense and tedium were leveled at our readers.

The LAST CATALOG you know about.

A lot of other stuff happened too, ask anybody who was there. Ask Benji Sprock to show you his Whole Earth stamp collection. It's quite a collection.

## Fame

(I/we've been subject to some, and you're partially responsible, so I thought you ought to know a little about it. Everything bad you've heard about fame is quite true. It can throw a personality into positive feedback, where audience demands drive his character past caricature and off the deep end. Its over-rewards can make a palea permanent. It wakes you up in the middle of the night with phone calls from whiffling strangers.

Worst of all is the classic bind of the successful dog-godder. If you do good well, your opportunities to do more increase, as your terming to do any decreases. You should relax, my you should, relax, with guilt yammering in your ear. FUCK EM ALL! I no answer either.

Some think they're strong, some think they're smart, Like butterflies they're pulled apart. America can break your heart. You don't know ill, sir, you don't know ill.

W. H. Auden

Kressner is right to note that celebrityhood is mainly a matter of convenience for people. There's no reason to take it personally. I will say a couple of good words for fame. It facilitates access if you want access. You can hang around with famous people, which is fun sometimes. Your credit is good with strangers, it's never hard to meet people. It's usually easy to find work, make some money. If you're without fame there's some things you're strong at that you might not be otherwise until it's too late.

The main problem with fame, or any kind of success, is the insulation it packs around you. You don't get all those little course-correcting signals from the universe. In part they're drowned out by all the people telling you what they think and what you ought to think. Also the signals just can't prick you; when a red danger light goes on, you can simply brake the machine until the light goes off, and then danger goes unheeded.

The voices that you need to hear, whisper, slowly and infrequently. The only way to hear them is listen. Gaze at something until it's nothing. And then at nothing until it's something.

There's a difference between intention driving us on, and mystery pulling us on. Mystery will always educate and correct. Intention can go off the end of its own limb.

If it's all right with you, I'm going back to the train. We get asked a lot. "What's in the future for you folks," as if we knew. Well, let's see. We'll clean up the garage and sell the production equipment, make a Kressner record, and then we'll start a traveling magazine called Spit in the Ocean. Out-of-work production people will drop our two weeks advance pay. We'll keep the Truck Store going in Menlo Park, and maybe try some things like it in relation to Portola Institute. We'll have our DEMISE party that Scott Bleech has set up at the Exploratorium in San Francisco. We'll do some traveling. We'll take a ride on Fischer's code.

Pause.

And begin again.

—SB  
May 31, 1971

## Whole Earth Truck Store



**PORTOLA INSTITUTE**  
INC.  
1115 MERRILL ST.  
MENLO PARK,  
CALIFORNIA  
94025-323-5155

The Whole Earth Truck Store is alive and quite well in Menlo Park. New ventures under way. Old CATALOGS and Supplements available. Come by.

And we still Mail Order.

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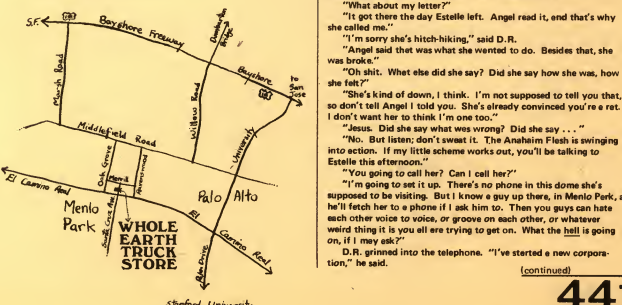
Portola Institute was established in 1966 as a non-profit corporation to encourage, organize, and conduct innovative educational projects. The Institute relies for support on private foundations and public agencies, to whom specific project proposals are submitted.

Because Portola Institute is a private organization with no need to produce profits or guarantee "success," it can experiment with new and unusual educational projects that would be difficult to administer within more structured organizations. For this reason the staff and facilities of the Institute are deliberately kept small and flexible.

Within its framework a wide variety of projects dealing with innovative education can be created as people with ideas are able to interest people with funds. New projects are always being considered, both within the existing divisions and programs, and within as yet unexplored realms of the learning experience.

Whole Earth Truck Store and Catalog is one division of Portola Institute. Other current activities include:

- Big Rock Candy Mountain
- Media Access Center
- Muse Resources Program
- Kids Teaching Kids
- Learning in the World
- Wilderness Education



"I'm going to set it up. There's no phone in this dome she's supposed to be visiting. But I know a phone in Menlo Park, and he'll fetch her to a phone if I ask him. Then you guys can hate each other voice to voice, or groove on each other, or whatever weird thing it is you all are trying to get on. What the hell is going on, if I may ask?"

D.R. grinned into the telephone. "I've started a new corporation," he said. (continued)



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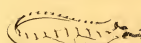
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RIP-SNORTER



Okay folks, hold onto your hats. This is Gurney Norman the author speaking, bringing you the end of this folk tale, and it's a rip-snorter. The guy in California that the Anaheim Flash sent to fetch Estella to the telephone was me. I live here in Menlo Park where the Wilsons' Earth Truck Store is, where Stewart and the production crew are wild in the final stages of the Last Catalog, and I'm wild in the final stages of this here tale.

As a matter of fact, I'm so pushed for time I wasn't at all sure I was going to be able to get away from the desk, long enough to go up to Troll's and Merilyn's dome on Skyline and fetch Estella. But I did, and it all worked out okay.

As the flash indicated, Estella was a little down. She'd been pretty blue since she and D.R. split up in Cincinnati her trip there had been pretty much of a summer. She was nervous and jumpy, and half-hostile when she asked me who the hell I was. I said I was a friend of the Anaheim Flash's, and that he'd called and asked me to get her to a telephone so she could call D.R., who was most desperate to hear from her.

Estella seemed a little suspicious of the whole thing, but she went with me to Skyline, where there was a phone booth. I went with her a dime and she went in, and stayed a long time, talking to D.R. I didn't hear what they said, but apparently it was a pretty groovy conversation because she came out all smiles, and announced that she was going to Kentucky.

I asked her how. She said the fastest way possible. That means through the air, I said, and off we went to the San Francisco airport, where I bought her a one-way ticket to Cincinnati, and gave her twenty dollars for bus fare from there south into the hills, to Blaine, Kentucky. (All on the assumption, of course, that I'm to be reimbursed in full by our mutual friend and benefactor, the Anaheim Flash.)

By the time the passengers were ready to board the plane, Estella had mellowed toward me some. Just before she started down the loading ramp she gave me this incredible kiss right on the mouth, and I think to tell you, it was fine. That D.R. is one lucky fellow, as I said he himself must realize by now.

(continued)









# THE WEDDING

There are no parents, of course.

There are no guests.

But it could work.

If it looks like it's worth the risk,

The leap.

If there's even a chance for the two of them there, then what D.R. and Estelle will have is most marvelous wedding.

One day late in the summer.

Or early in the fall.

Any day long.

From morning to night, a celebration.

And people they love will come.

The Flash will come.

He will have to come because he's the presiding minister.

All the way from California, driving his silver Lotus.

The Flash in his silver jumpsuit.

The Flash with his silver hair.

The Flash with his silver eyebrows, and little silver ring in the side of his nose.

Silver boots, with pointy silver toes, and silver buttons down the sides.

And buttons on his jumpsuit, silver.

And silver scarf and silver gloves and sunglasses, on both sides.

Silver.

The Flash had his silver helmet with him too, but as he parked the Lotus in front of Godsey's Store he thought: I probably shouldn't overdo this silver bit. So he left the helmet on the seat and clambered out, unclogging his five foot, four inch frame as Berry Berry came rolling by in his wheelchair.

"My name's Berry Berry," Barry said.

"I'm the Anaheim Flash," said the Flash, and he got behind Berry's chair and pushed him up the Trace Fork road behind a band of freaks and weirdos, strapping colorful ribbons in the weeds.

"I'm Berry Berry," said Berry as they rolled by.

"And this is the Anaheim Flash."

"Morning," said J.D. "I'm J.D."

And Pam said she was Pam.

Berry shook hands with them every one, Diane and Jerry and Amy and Barbara and Dudley and John and B. Anne and Peter and Laura and Soni and Doug and Terry and Francine and Bernie.

And Shera was filming it all.

She'd moved down the road a ways from the party to catch the new arrivals, coming up.

She filmed the Flash and Berry Berry.

And Dick Raymond scoring Mrs. Godsey up the road.

She filmed them all passing, and then from low in the yard she filmed

Angel's band of Oregonians,

Ken and Fay and Babbs and

Gratch and Hassler and

Paula and Zodiac and Sky

and some others, decorating

the front porch steps

as an enter where the

bride and groom

would stand.

She filmed Reverend Bagby and some men

from the church, building a table across the yard.

Fifteen swansons, covered with boards, then women spreading sheets as tablecloth, and tacking on red and blue tape.

She filmed Fred and George and Mike and Evelyn and Steamboat and Stewart, asleep in a people pile, with Lots and Steve and Holly and Lloyd and Sarah trying to wake them up to up a while at The Captain, an utter fear in purple velvet and long muscades and conductor's hat, too small for his shaggy head sneaked up with his tape recorder to catch what the people said.

"Deliverance. Release from tension," said George.

"No shit!" said Fred.

"And Neptune and Jupiter are in conjunction in Sagittarius," said Mike.

"Be well," said Stewart.

"Hey Mike, I just felt the baby kick," said Evelyn.

"Huh? Oh, the wedding!" said Steamboat.

And The Captain recorded it all.

He recorded the Scotts boys, Henry and Tommy from Second Creek, making bird sounds with their mouths.

The Captain tuned in on a conversation among some women carrying dishes to the table. One was Marilyn, of Troll and Marilyn, big and beautiful and pregnant, saying "It'll be a natural childbirth. I'm going to have it at home."

"I had all my younguns at home," said Mrs. Thornton. "I tended by a granny-woman. Old Aunt Dicky Ryan from Turkey Creek. She's dead now, bless her soul."

And over by the Kool-Aid table Elmer the mailman was rapping with a leather and denim freak from San Diego, who hadn't said what his name was yet.

But Mrs. Thornton declined. "Get Brother Bagby to read my part," she said. "I've got to go in the kitchen and help out."

The Captain recorded that, and then tuned into the band again.

J.D. had joined it with his

author's, and Steamboat with his drums. Two other fellows that no one knew came in with a bongo and flute. Their exotic sound, which they had already dubbed Hillbilly Hindu Rock, jarred Obba and fourteen dancers in tie-dyed leotards out of the house and down the steps, a winding snake of movement through the crowd. They circled around the charcoal pit where Leonard and Doyle and Troll were baking potatoes and barbecuing fifty chickens. They wound around the long, white table where Roxie and Marcelle and Mrs. Thornton and Peter and

"I think greenish is the answer to about half of mankind's problems," the freak said, and Elmer replied, "My daddy picked Santa for a living, when I was a boy. It's as native to these hills as it is to your yonder in China."

The Captain recorded that.

And he recorded Maybeline Monday from the Organic Sunflower Commune in California, telling Mrs. Jennings of Jennings Branch that she was doing her own weaving now. And making quills, and earning her own vegetables.

"We live in a commune, on the land, you see. We're opposed to the nuclear family."

"Lord, child," said Mrs. Jennings. "I've been weaving since I was nine years old. And ever quilt in our old house is hand-made. I had thirteen brothers and sisters, and then nine younguns of my own. We all live over yonder on Jennings Branch, you ought to come see us before you leave."

He recorded the musicians warning up.

At last, when all had settled, D.R. and Estelle came through the screen door, across the porch and down the steps to where they were supposed to stand.

D.R. had his leathers on, leather pants and leather shirt, and cooskin cap with tail.

Estelle had her ankle-length gingham on.

There were no flowers.

Estelle's bouquet was simply D.R.'s hand in her own.

They stood there together, grinning at the people who grinned at them, waiting for the Flash to begin.

The Flash moves now to the third step up, so he can see over Leonard's head. He has a book with him, and a large brown bag filled with something, which he rests on the step by his foot. The book is the Chalice. He opens it.

After Completion and clearing his throat, he reads:

"The transition from the old to the new time is already accomplished. In principle, everything stands systematized, and it is only in regard to details that success is still to be achieved. In respect to this, however, we must be careful to maintain the right attitude. Everything proceeding out of the second and third can all too easily tempt us to relax and let things take their course without troubling over details. Such indifference is the root of all evil. Symptoms of decay are bound to be the result. Here we have the rule indicating the usual course of history. But this rule is not an insuperable law. He who understands it is in position to avoid its effects by dint of unremitting perseverance and caution."

The Flash does the book and places it on a step behind him.

Then he calls upon the Reverend Bagby to read the little passage from the Book of Tao.

"The surest test if a man be sane is if he accepts life whole, as it is," says Reverend Bagby.

And then the Flash calls upon Swampy High Time to read from the Book of James.

"A double-minded man is unstable in all his ways," says Swampy High Time.

As he and Reverend Bagby step back into the crowd, the Flash reaches into his pocket and takes out two rings. He hands one each to Leonard and Angel, who in turn hand them to D.R. and Estelle.

They face each other.

They hold out their left hands, and simultaneously slip the rings on one another's fingers.

Then they come together in a long and fulsome kiss.

And the Flash says, "As a minister in good standing of the Universal Life Church, I pronounce you give husband and wife."

And I pronounce everybody here at this wedding hereby married to one another."

The Flash reaches into the bag at his feet then, and from it he begins to fling rice over the gathered people.

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Who is nothing Hear that!  
Meaning:  
The stars sing  
Because it's always all right!  
So far you've  
Not been near except when  
You didn't know. Night's day  
Was everywhere. No one is  
Ever separated from every other  
For then the world would die.  
And the world does not die!  
O Glory, Glory of the Light!  
*We live one life. Message ends*

Kenneth Patchen



**We can't put it together.**

**It is together.**

